



Standard Tables of Body Measurements for Infants, Sizes 0 to 24¹

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INTRODUCTION

These tables were developed from data published by the U.S. Department of Commerce. These data were based on original research conducted by the U.S. Department of Agriculture² in the 1930's. This standard takes into consideration children's growth patterns reflected in the 1980 charts for the National Center for Health Statistics³ and the 1977 Anthropometric Study of U.S. Infants and Children conducted by the University of Michigan.⁴ All sudden shifts of proportion have been eliminated so as to reflect the gradual growth and development of the infant. To verify the proposed body measurements, a limited sampling of children was measured and fitted with garments made as directed in these tables.

1. Scope

1.1 These tables list body measurements of infants from size 0 to 24. Although these measurements are body measurements, they can be used as a baseline in designing apparel for infants in this size range when taking into account such factors as fabric type, ease for body movement, styling, and fit.

1.2 Infants 0–24 designate sizes and do not refer to age.

1.3 The values stated in either acceptable SI units or inch-pound units shall be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system must be used independently of the other, without combining values in any way.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

D 123 Terminology Relating to Textile Materials⁵

¹ These tables are under the jurisdiction of ASTM Committee D13 on Textiles and are the direct responsibility of Subcommittee D13.55 on Body Measurement for Apparel Sizing.

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² O'Brien, Ruth, et al., *Body Measurement to American Boys and Girls for Garment and Pattern Construction*, U.S. Department of Agriculture, Miscellaneous Publication No. 366, July 1941.

³ Available from National Center for Health Statistics.

⁴ Snyder, Lawrence, *Anthropometry of Infants, Children, and Youth to Age 18*, University of Michigan, May 1977.

⁵ *Annual Book of ASTM Standards*, Vol 07.01.

D 5219 Terminology Relating to Body Dimensions for Apparel Sizing⁶

2.2 ISO Standard:

ISO 3635 Size Designation of Clothes, Definitions, and Body Measurement Procedures⁷

3. Terminology

3.1 Definitions:

3.1.1 For definitions relating to body dimensions, refer to Terminology D 5219.

3.1.2 For definitions of other textile terms used in this standard, refer to Terminology D 123.

4. Significance and Use

4.1 The use of the body measurement information in Tables 1 and 2 will assist manufacturers in developing patterns and garments that are consistent with the current anthropometric characteristics of the population of interest. This practice should in turn reduce or minimize consumer confusion and dissatisfaction related to apparel sizing. (Also refer to ISO 3635 Size Designation Procedures.)

5. Apparatus

5.1 *Tape Measure*, dimensionally stable and approximately 15-mm ($\frac{1}{2}$ -in.) wide and accurately graduated in mm ($\frac{1}{16}$ -in.) increments.

5.2 *Plastic Goniometer*, to measure the degree of shoulder slope.

⁶ *Annual Book of ASTM Standards*, Vol 07.02.

⁷ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

TABLE 1 Infants 0 to 24—Body Measurements, SI Units

Size	0 to 3	3 to 6	6 to 9	9 to 12	12 to 18	18 to 24
Stature, cm	Up to 60	60 to 68	69 to 72	73 to 78	79 to 83	84 to 88
Body Weight, kg	Up to 6.5	6.6 to 7.4	7.5 to 8.2	8.3 to 9.2	9.3 to 11.0	11.1 to 12.6
Girth Measurements, cm						
Chest Girth	41.9	44.4	45.7	47.0	49.5	52.1
Waist Girth	45.7	47.0	47.6	48.3	49.5	50.8
Hip Girth	43.2	45.7	47.0	48.3	50.8	53.3
Neck Base Girth	21.0	22.2	22.9	23.5	24.4	25.4
Armscye Girth	15.2	16.8	17.6	18.4	20.0	21.6
Upper-Arm Girth	13.0	13.7	14.0	14.3	14.9	15.6
Elbow Girth	14.6	15.2	15.6	15.9	16.5	17.1
Wrist Girth	10.2	10.5	10.6	10.8	11.1	11.4
Thigh Girth	23.5	25.1	25.9	26.7	28.3	29.8
Ankle Girth	11.4	12.1	12.4	12.7	13.3	14.0
Total Vertical Trunk Length	63.5	68.6	71.1	73.7	78.7	83.8
Total Crotch Length	28.3	31.1	32.5	34.0	36.8	39.7
Head Girth	41.9	43.2	44.4	46.4	48.3	2.5
Vertical Measurements, cm						
Cervicale Height	43.8	50.8	54.3	57.8	64.8	71.8
Head and Neck Length	14.6	15.2	15.6	15.9	16.5	17.1
Center Back Waist Length	15.2	16.5	17.1	17.8	19.0	20.3
Center Front Waist Length	14.6	15.9	16.5	17.1	18.4	19.7
Cervicale to Knee Height	31.1	35.6	37.8	40.0	44.4	48.9
Scye Depth	8.9	9.5	9.8	10.2	10.8	11.4
Waist Height	28.6	34.3	37.1	40.0	45.7	51.4
Hip Height	22.2	27.3	29.8	32.4	37.5	42.5
Waist to Knee Height	15.9	19.0	20.6	22.2	25.4	28.6
Waist to Knee	19.0	23.5	25.7	27.9	32.4	36.8
Knee Height	12.7	15.2	16.5	17.8	20.3	22.9
Ankle Height	3.5	3.8	4.0	4.1	4.4	4.8
Width and Length Measurements, cm						
Shoulder Length	6.7	7.0	7.1	7.3	7.6	7.9
Across Back Shoulder Width	18.4	19.7	20.3	21.0	22.2	23.5
Arm Length	17.8	20.6	22.1	23.5	26.4	29.2
Cervicale to Wrist Length	27.0	30.5	32.2	34.0	37.5	41.0
Foot Length	9.5	10.8	11.4	12.1	13.3	14.6
Foot Width	4.4	4.8	5.1	5.4	5.7	6.0

5.3 *Scale*, standard, calibrated body weight type for infants.

5.4 *Plastic Ruler*, dimensionally stable, flat and accurately graduated in mm ($\frac{1}{16}$ -in.) increments.

6. Procedure

6.1 General:

6.1.1 For all vertical measurements, subject is to be lying down on its back, on a flat surface, with legs extended.

6.1.2 For all horizontal measurements, hold subject in a vertical position.

6.1.3 Take measurements over nude body.

6.1.4 Take all measurements from the same side of the body for consistency.

6.1.5 Refer to Terminology D 5219 for the location of all points to be measured.

6.2 Body Measurements:

6.2.1 *Stature*—Measure the straight distance from the top of the head to the soles of the feet while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90° to the leg).

6.2.2 *Body Weight*—Weigh the nude infant on a calibrated infant scale.

6.2.3 *Chest Girth*—Measure the horizontal circumference around the body under the arms and across the fullest part of the chest apex including the lower portion of the shoulder blades.

6.2.4 *Waist Girth*—Measure the minimum horizontal circumference around the body at waist height.

6.2.5 *Hip Girth*—Measure horizontally the maximum circumference around the body at hip height.

6.2.6 *Neck Base Girth*—Measure the circumference of the neck over the cervicale at the back, and the top of the collarbone at the front.

6.2.7 *Armscye Girth*—Measure the distance from the shoulder joint through the front break-point, the armpit, the back-break point, and to the starting point with the arms down.

6.2.8 *Upper-Arm Girth*—Measure the maximum circumference of the arm midway between the elbow and shoulder joints with the arm bent 1.57 rad (90°).

6.2.9 *Elbow Girth*—Measure the maximum circumference of the elbow over the prominence of the elbow bone with the arm bent 1.57 rad (90°).

6.2.10 *Wrist Girth*—Measure the maximum circumference of the wrist over the inner and outer prominence of the wrist bones.

6.2.11 *Thigh Girth*—Measure the maximum circumference of the upper leg close to the crotch.

6.2.12 *Ankle Girth*—Measure the maximum circumference of the ankle over the greatest prominence of the ankle bones.

6.2.13 *Total Vertical Trunk*—Measure the circumference from a point on the right shoulder midway between the neck base and shoulder joint down the back, through the crotch, and up over the prominence of the right chest apex to the starting point, avoiding constriction at the crotch.

TABLE 2 Infants 0 to 24—Body Measurements, Inch-Pound Units

Size	0 to 3	3 to 6	6 to 9	9 to 12	12 to 18	18 to 24
Stature, in.	Up to 23½	24 to 26½	27 to 27½	28 to 30½	31 to 32½	33 to 34½
Body Weight, lb	Up to 12.0	12.5 to 16.0	18.5 to 20.0	20.5 to 24.0	24.5 to 27.6	25 to 28
Girth Measurements, in.						
Chest Girth	16½	17½	18	18½	19½	20½
Waist Girth	18	18½	18¾	19	19½	20
Hip Girth	17	18	18 ½	19	20	21
Neck Base Girth	8¼	8¾	9	9¼	9¾	10
Armscye Girth	6	6⅝	6 ¹⁵ / ₁₆	7¼	7 ⅞	8½
Upper-Arm Girth	5⅝	5¾	5½	5⅝	5⅞	6⅞
Elbow Girth	5¾	6	6⅞	6¼	6½	6¾
Wrist Girth	4	4⅞	4 ³ / ₁₆	4¼	4¾	4½
Thigh Girth	9¼	9⅞	10 ³ / ₁₆	10½	11⅞	11¾
Ankle Girth	4½	4¾	4⅞	5	5¼	5½
Total Vertical Trunk Length	25	27	28	29	31	33
Total Crotch Length	11⅞	12¼	12 ¹³ / ₁₆	13¾	14½	15⅝
Head Girth	16½	17	17½	18¼	19	1
Vertical Measurements, in.						
Cervicale Height	17¼	20	21¾	22¾	25½	28¼
Head and Neck Length	5¾	6	6⅞	6¼	6½	6¾
Center Back Waist Length	6	6½	6¾	7	7½	8
Center Front Waist Length	5¾	6¼	6½	6¾	7¼	7 ¾
Cervicale to Knee Height	12¼	14	14⅞	15¾	17½	19¼
Scye Depth	3½	3¾	3⅞	4	4¼	4½
Waist Height	11¼	13½	14⅝	15¾	18	20¼
Hip Height	8¾	10¾	11¾	12¾	14¾	16¾
Waist to Knee Height	6¼	7½	8⅞	8¾	10	11¼
Crotch Height	7½	9¼	10⅞	11	12¾	14½
Knee Height	5	6	6 ½	7	8	9
Ankle Height	1¾	1½	1 ⁹ / ₁₆	1⅝	1¾	1⅞
Width and Length Measurements, in.						
Shoulder Length	2⅝	2¾	2 ¹³ / ₁₆	2⅞	3	3⅞
Across Back Shoulder Width	7¼	7¾	8	8¼	8¾	9¼
Arm Length	7	8⅞	8 ¹¹ / ₁₆	9¼	10¾	11½
Cervicale to Wrist Length	10⅝	12	12 ¹¹ / ₁₆	13¾	14¾	16⅞
Foot Length	3¾	4¼	4½	4¾	5¼	5¾
Foot Width	1¾	1⅞	2	2⅞	2¼	2⅞

6.2.14 *Total Crotch Length*—Measure the distance from waist level at the center front through the crotch and to the waist level at the center back avoiding constriction at the crotch.

6.2.15 *Head Girth*—Measure the maximum horizontal circumference of the head above the ears.

6.2.16 *Cervicale Height*—Measure the straight distance from the cervicale to the soles of the feet while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.17 *Head and Neck Length*—Measure the distance from the crown of the head to the cervicale (contour) with the head erect and the neck unbent while subject is lying down flat with legs extended.

6.2.18 *Center Back Waist Length*—Measure the distance from the cervicale to the center back waist level along the spine (contour).

6.2.19 *Center Front Waist Length*—Measure the distance from the center front neck base line to the center front waist level (contour).

6.2.20 *Cervicale to Knee Height*—Measure the straight distance from the cervicale to a point level with the midpoint of the back of the knee (or crease) while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.21 *Scye Depth*—Measure the vertical distance from the cervicale to the back-break point level with the arms down.

6.2.22 *Waist Height*—Measure the straight distance from the waist level to the soles of the feet along the side of the body

while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.23 *Hip Height*—Measure the straight distance from the hip level to the soles of the feet along the side of the body while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.24 *Waist to Knee Height*—Measure the straight distance from the waist level to a point level with the midpoint of the back of the knee (or crease) along the side of the body while subject is lying down flat with legs extended.

6.2.25 *Crotch Height*—Measure the straight distance from the midpoint of the crotch to the soles of the feet while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.26 *Knee Height*—Measure the straight distance from the midpoint (or crease) of the knee to the soles of the feet while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.27 *Ankle Height*—Measure the straight distance from the prominence of the outer ankle bone to the soles of the feet while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°).

6.2.28 *Shoulder Length*—Measure the distance from the side of the neck base to the top of the shoulder joint with the arm down.

6.2.29 *Across Back Shoulder Width*—Measure the horizontal distance across the back from the top of one shoulder joint to the top of the other shoulder joint with the arms down.

6.2.30 *Arm Length*—Measure the distance from the top of the shoulder joint along the outside of the arm over the elbow to the prominent wrist bone with the arm bent at 1.57 rad (90°) and the and placed on the hip.

6.2.31 *Cervicale to Wrist Length*—Measure the distance from the cervicale over top of the shoulder joint along the outside of the arm over the elbow to the prominent wrist bone with the arm bent at 1.57 rad (90°) and the and placed on the hip.

6.2.32 *Foot Length*—Measure the straight distance from the prominence of the back of the heel to the prominence of the longest toe with foot on a flat surface and without shoes (use stable flat ruler).

6.2.33 *Foot Width*—Measure the straight distance from one side of the foot to the other side at the widest part with foot on a flat surface and without shoes (use stable flat ruler).

7. Keywords

7.1 apparel; body measurements; garment sizes; infants; tables

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