

**Basic Data on Anthropometric  
Measurements and Angular  
Measurements of the Hip and  
Knee Joints for Selected Age Groups  
1-74 Years of Age  
United States, 1971-1975**

Presents findings of the first National Health and Nutrition Examination Survey on body measurements and angular measurements of the hip and knee joints of the U.S. population, 1-74 years of age, by age, sex, and race, 1971-75. Smoothed percentile distributions of selected body measurements (triceps and subscapular skinfolds, and upper arm girth) attained at specific chronologic ages from 2 to 18 years are also presented.

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## PREFACE

The National Center for Health Statistics has as its mission the collection, analysis, and dissemination of data on the health of the population of the United States. One of the major programs is the National Health Examination Survey, in which extensive examinations of a sample of the U.S. population are conducted. Data from this survey have been published periodically in Series 11 reports of *Vital and Health Statistics*.

Historically, the published documents in Series 11 present only a small fraction of the available data. In order to make additional data available for users, the Center has for many years had a policy of preparing public use tapes for purchase by persons interested in more detailed analysis or analysis of additional variables not published in Series 11 reports. However, these data are only accessible to persons with computers and support staff who can read, interpret, and analyze the data. In order to make these data more generally accessible to many users and, in particular, to persons not able to directly use data tapes, the Division of Health Examination Statistics, in the autumn of 1977, initiated a program to release, along with the data tapes, basic descriptive summary tables of data contained in those tapes. These tabular summaries have been termed "basic data publications," of which this report is one.

These basic data publications present findings of the first National Health and Nutrition Examination Survey of 1971-75. For each of the data sets, these publications include information on the methods used to collect the data, a descriptive summary of the tables included, an index to the tables, and the tables themselves. An appendix describes the basic format of the associated data tape. More detailed information on use of the data for additional analysis is available on request from the staff of the Division of Health Examination Statistics.

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### SYMBOLS

Data not available-----	---
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Quantity more than 0 but less than 0.05----	0.0
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# Basic Data on Anthropometric Measurements and Angular Measurements of the Hip and Knee Joints For Selected Age Groups 1-74 Years of Age

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## INTRODUCTION

This report presents findings on anthropometric and goniometric measurements from the first National Health and Nutrition Examination Survey, 1971-75. The survey, conducted by the Division of Health Examination Statistics of the National Center for Health Statistics, was designed to collect data by direct examination of probability samples of the U.S. civilian noninstitutionalized population 1-74 years. Data included measures of nutritional status as well as an assessment of health and medical care needs.

The sample persons were examined in specially constructed mobile examination centers that were moved from location to location around the country. The field teams included professional and paraprofessional medical and dental examiners and technicians, interviewers, and other staff who traveled to various locations. A detailed description of the specific content and plan of operation of the survey, including the sample design and forms used to collect the data, has been published.<sup>1,2</sup>

The National Center for Health Statistics has also published data on body measurements collected during Cycles I, II, and III of the National Health Examination Survey—data was collected in 1960-62 for adults ages 18-79 years (Cycle I), in 1963-65 for children ages 6-11 years (Cycle II), and in 1966-70 for youths ages 12-17

years (Cycle III). If the reader is interested in acquiring any of these reports, the *Current Listing and Topical Index to the Vital and Health Statistics Series 1962-1977*<sup>3</sup> should be consulted.

The age, sex, and race distribution of the U.S. civilian noninstitutionalized population at the midpoint of the survey and the distribution of the probability sample drawn from it are presented in appendix I. Also in appendix I, the statistical design for the first National Health and Nutrition Examination Survey (NHANES I) and the reliability of the estimates are discussed. An illustration of the use of the standard error estimates and a formula for approximating standard errors for estimates shown in the body measurement tables of this report are also presented in appendix I.

The definitions of certain demographic terms used in this report are found in appendix II. A summary of the anthropometric and goniometric contents of the microdata tape used in preparation of this report is found in appendix III. Microdata tapes, including the one from which the findings in this report were prepared, are available for purchase by persons interested in more detailed analysis. The sample distribution of all the variables on the microdata tapes can be found in the respective tape documentation. Appendix IV contains methods and definitions used in the collection of anthropometric and goniometric measures.

## METHODS

### Anthropometric Measurements

The examinees changed from their street clothing into disposable paper examination uniforms and foam rubber slippers designed to facilitate and standardize as many elements of the examination as possible. Body measurements were made at various times throughout the day at each examination center and in different seasons of the year and, thus, body measurements were not standardized with regard to diurnal and seasonal variations.

Trained technicians, using standardized anthropometric equipment, made measurements quickly and at an acceptable level of accuracy and replicability. Multiple measurements were taken until two results agreed within specified limits. One member of the examining team, who was responsible for observing and correcting any error in the measurement technique while aiding in the positioning of the examinee, acted as a recorder.

Where possible and applicable, all measurements were taken on the right side of the body. Left side measurements were taken if the right side could not be used because of casts, amputations, or any other reasons. Detailed explanations of the procedures used to determine the body measurements included in this report are found in appendix IV.

NHANES I primarily provided anthropometric data to evaluate the nutritional and health status of the population in regard to growth, obesity, skeletal, and muscular development. Such evaluation depends principally on the physical measurements of the body and comparisons with suitable standards of selected items of body measurements. Body measurements depend, in part, on the supply of nutrients and, thus, provided one method of assessing nutritional status. Heights and weights are informative though limited in terms of body composition. Body weight is influenced by such components as bone, muscle, and fat. The separation into its primary components provides the framework for description of the population's nutritional status. Therefore, the anthropometric battery included height, sitting height,

weight, skinfold thickness (triceps and subscapular), upper arm girth, and body dimensions (elbow and bitrochanteric breadths). Also included were measurements of chest circumference of children 1-7 years of age and a special subsample of adults 25-74 years of age. In addition, these body measurements provide indices of overweight, obesity, and muscularity. Height, weight, growth, overweight, and obesity findings have been published in previous reports<sup>4-8</sup> and will not be presented in this report.

The cross-sectional data on body measurements were obtained on persons of different ages who represent different birth cohorts. The age trends show the body measurement values for successive birth cohorts of persons who were of different ages when examined and reflect the effect of different environmental as well as hereditary influences. The limitations of cross-sectional data in contrast to longitudinal data are recognized in considering changes with age.

As suggested by the recommendations concerning body measurements for the characterization of nutritional status,<sup>9</sup> skinfold thickness measurements were taken with a Lange skinfold caliper that was calibrated to exert a pressure of 10 g per square millimeter of jaw surface. These measurements of adipose tissue are, thus, contained in the subcutaneous fat deposit that can be characterized quantitatively by measuring the thickness of the skinfolds.

The measurement of skinfold thickness is one of a number of methods<sup>10-12</sup> used to determine the body fatness of individuals. It is less involved, does not require sophisticated hardware, and can provide accurate results. In this regard, the taking of skinfolds has distinct advantages. Their measurement does not require elaborate, expensive, or timely procedures and, particularly for field studies, are recommended as an integral element in body composition research.<sup>13</sup> The taking of skinfolds is the easiest and most direct approach to the measurement of body fat. The validity of skinfolds as measures of body fat has been proven an acceptable survey method. This approach involves the measurement of a double fold of subcutaneous tissue plus skin, pulled away from the underlying tissue at a predetermined site on the body.



With regard to skeletal structure, two direct anthropometric measures were taken—elbow and bitrochanteric breadth; both measures are unaffected by degree of adiposity and are closely representative of bony dimensions.

Upper arm girth is a measure of three body components—bone, muscle, and fat. The upper arm diameter, corrected for the thickness of the layer of subcutaneous fat (triceps skinfold thickness), may serve as a criterion of muscular development.

### **Goniometric Measurements**

Goniometry means the measurement of angles. More specifically, in the NHANES I survey, it means the measurement in degrees of the range of motion of specific joints whose natural anatomical position is generally considered to be zero degrees. All goniometric measurements were taken with a double-armed Universal goniometer, pivoted over the axis of motion of the joint of interest. Since the axis of motion could shift somewhat if the joint were to move, care was taken to make sure the pivot of the goniometer was as close as possible to the axis when the measurements were made.

Goniometric measurements were taken to ascertain the range of motion of certain joints in a special subset of NHANES I adults 25-74 years of age. Specifically, 16 measurements were taken involving the extension, flexion, abduction, adduction, internal and external rotation of both hips, and extension and flexion of the knees. No goniometric findings are presented in this report for adduction of the right and left hip and extension of the right and left knee since few sample persons were found to have nonnormal values for these measures. Detailed explanations of the procedures used in the goniometric examination are given in appendix IV.

Using a procedure similar to that utilized in the determination of body measurements, two technicians were employed in the collection of goniometric data in an attempt to insure accurate reading and recording of the measurements. One of the technicians acted as the examiner while the second technician recorded the measurements on the examinee's form. As each

measurement was completed, its value was dictated to the recorder. The recorder repeated the value aloud for verification and then entered it on the examinee's form.

These efforts to reduce errors may not have been sufficient. The original plan called for the collection of this data for all 65 stands of the survey, but investigations into the quality of the data showed that a satisfactory level of reproducibility was not being achieved. The collection of goniometric data was discontinued after the 35 stand subsample was complete.

In this context, reproducibility is defined as the equality or similarity of replicated values of the same measurement on the same person. Reproducibility is a function of both technician performance and the inherent variability of the given measurement. The inherent variability is in turn, at least partially, a function of the degree of effort-dependence with the more effort-dependent measurement being generally less reproducible.

Most goniometric measurements are highly effort-dependent. In light of the strenuous efforts made to maximize technician performance and recording accuracy, it seems likely that the lack of reproducibility is due almost entirely to the inherent variability (effort-dependency) of the measurements; therefore, technician retraining or procedural modifications would not significantly increase the level of reproducibility.

When a satisfactory reproducibility criterion is not met, making inferences solely from estimates derived from the data may be somewhat misleading. However, if inferences have to be made, this subsample of 35 stands represents the best estimates available. Moreover, the goniometric data may be used with other data gathered in the survey to collectively produce more reliable estimates of specific health conditions in the civilian noninstitutionalized population of the United States.

## **FINDINGS**

### **Anthropometric Measurements**

Tables 1-27 present basic anthropometric data from NHANES I by age, sex, and race. In

addition to the sample sizes and population estimates, the tables include for each age group means for the specified measurements, standard deviations, and selected percentiles from the 5th through the 95th.

*Triceps and subscapular skinfolds.*—Comparisons in this report of skinfold measures are based on medians rather than means since the marked skewness of the skinfold distributions suggests the use of the median as the better measure of central tendency.

The differences between sexes in limb fat, as measured by the triceps skinfold, are particularly evident in adults (tables 1-4 and figure 1). In 22 of the 24 age groups from 1-74 years shown in the tables, the median triceps skinfold

values for females exceeded those for males. In the other two age groups (ages 1 year and 2 years), the median triceps skinfolds for males and females were equal.

After age 11, the median triceps skinfold values for females substantially exceeded those values for males, reaching a peak of 25 mm (millimeters) at ages 45-64 years. The peak triceps value for males was only 12 mm and was reached at ages 25-44 years.

With one exception, the observed median triceps skinfold for white males was greater than that for black males for all the selected age groups (figure 2). The pattern observed for females was different. In the age groups 1 year to 20-24 years white females generally had higher

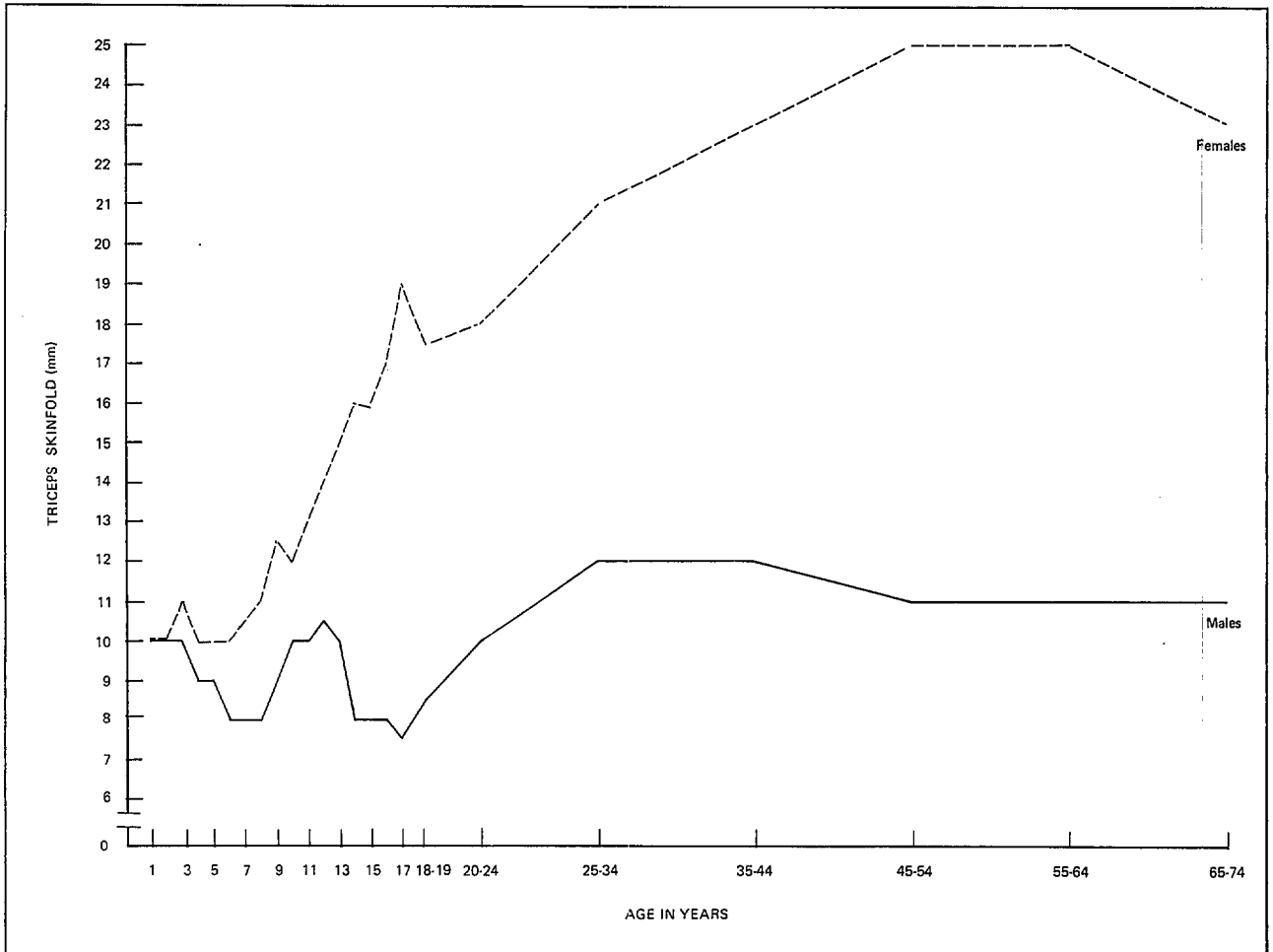


Figure 1. Median triceps skinfold for persons ages 1-74 years, by age and sex: United States, 1971-74

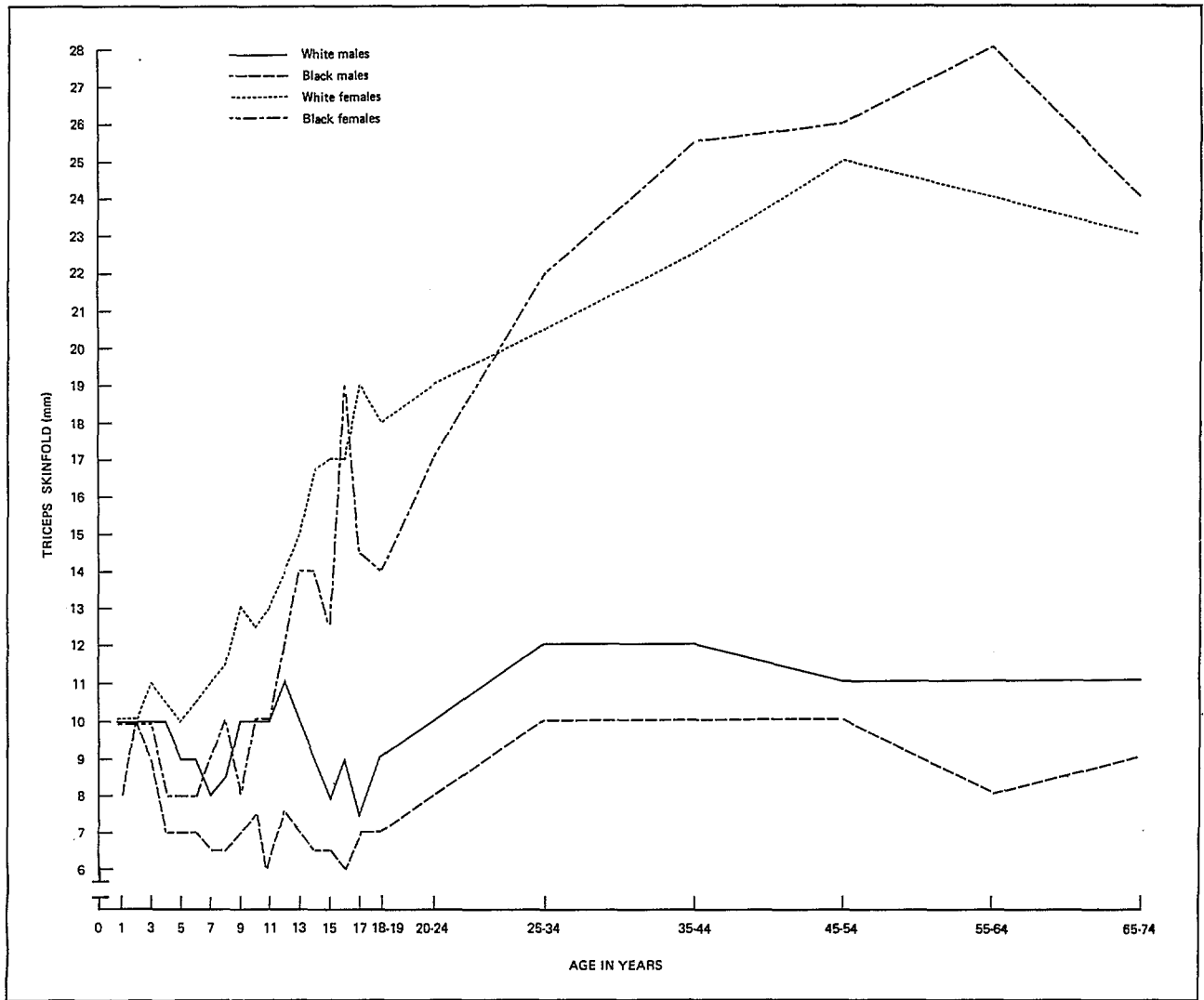


Figure 2. Median triceps skinfold for persons ages 1-74 years, by age, race, and sex: United States, 1971-74

median triceps skinfold values than black females. From ages 25 years and over, black females had greater median triceps skinfold values than white females.

Generally, median subscapular skinfold values for males were less than those recorded for females (tables 5-8 and figure 3). After age 8, median subscapular skinfold values for all sex-race groups generally increased with age into adulthood and then declined slightly in the older age groups (figure 4).

The subscapular values of black females increased substantially from 12 mm for the age

group 18-19 years to a peak of 30 mm for the age groups 45-54 years.

*Upper arm girth.*—The mean upper arm girths (arm circumferences) for all sex-race groups generally increased from ages 1-16 years (tables 9-10).

In adults, sex and race differences became more apparent (tables 11-12). Males were observed to have higher mean values than females. With one exception black males had slightly greater mean upper arm girths than white males, however, the observed differences were small. From the age group 20-24 years and over black

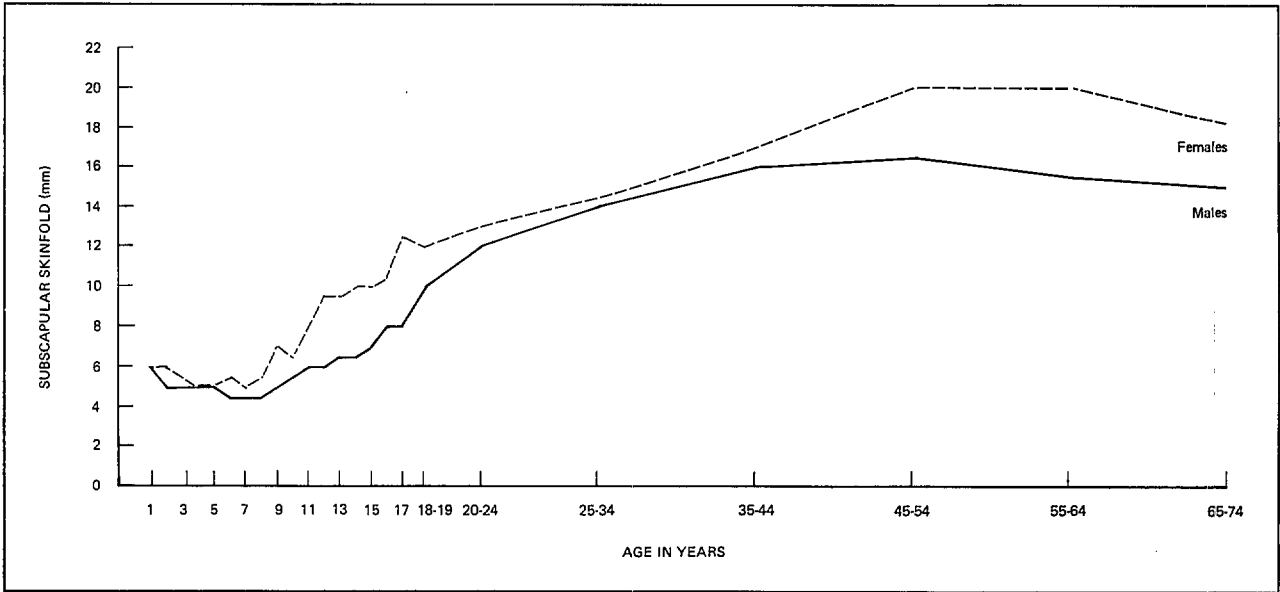


Figure 3. Median subscapular skinfold for persons ages 1-74 years, by age and sex: United States, 1971-74

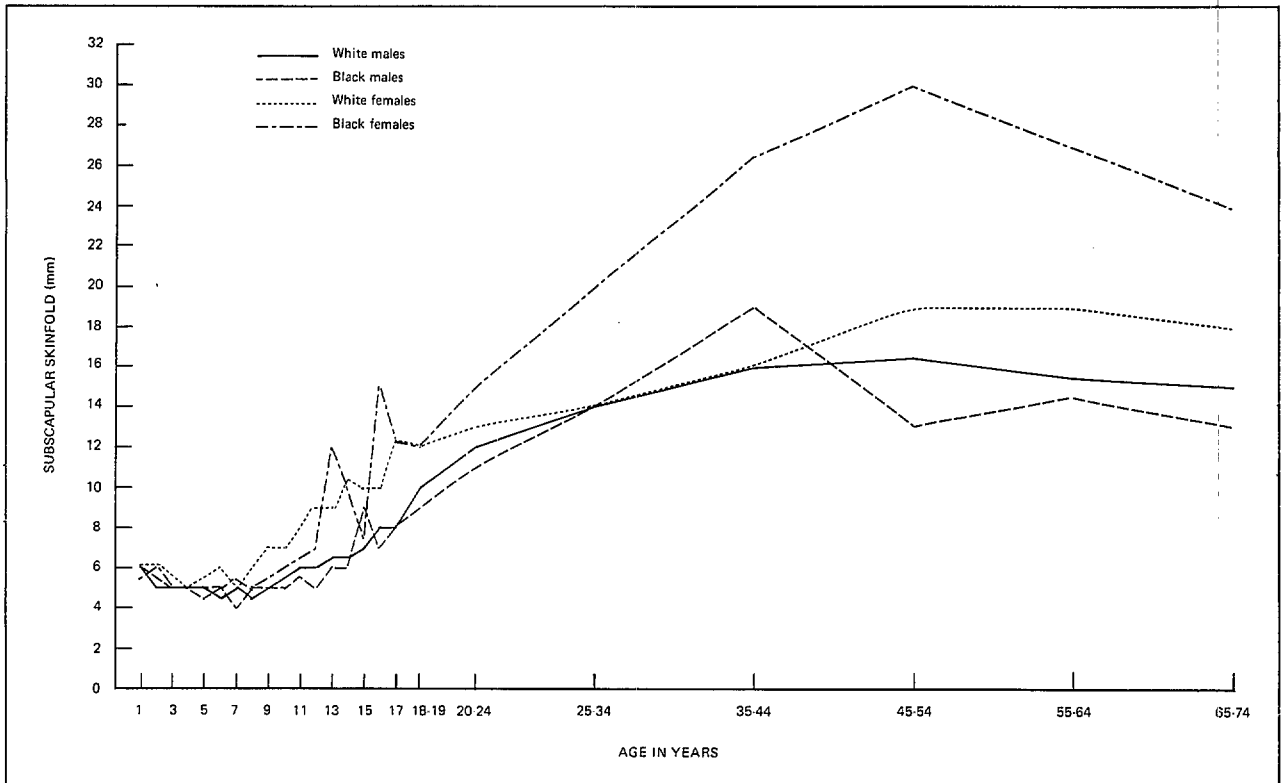


Figure 4. Median subscapular skinfold for persons ages 1-74 years, by age, race, and sex: United States, 1971-74

females had higher mean values than white females, and in the older age groups, they had the largest observed mean values of all four sex-race groups. Since bone and muscle do not increase at these ages, the increases in upper arm girth for black women are probably due to larger increases in arm subcutaneous tissue.

*Elbow breadth.*—The differences in elbow breadth between males and females were small in children ages 1-12 years, with boys having mean values equal to or slightly greater than those of girls at all ages. After age 12, the differences in mean elbow breadth between males and females increased and remained fairly constant at about 1 cm all through adulthood (tables 13-16).

*Other body measurements.*—Tables 17-20 present findings for sitting height, a measure of upper and lower extremity lengths. Due to a procedural problem, many sitting height measures for children 2 years of age were not done. While information for 2 year olds is presented in this report, the data do not represent a national probability sample and are included for comparative purposes only. Distributions of bitrochanteric breadth are found in tables 21-24. Table 25 presents findings for chest circumference of children 1-7 years of age. In addition, chest circumferences at full inspiration and full expiration are presented for a special subsample of adults 25-74 years of age (tables 26 and 27).

*Curve smoothing.*—In addition to presenting observed distributions of skinfolds and upper arm girth (arm circumference) for children ages 1-17 years from NHANES I, smoothed percentile curves are presented. These curves were produced by utilizing the same smoothing technique employed in the production of the NCHS Growth Charts.<sup>8</sup> The National Health Examination Survey Cycles II and III and NHANES I data were pooled for persons aged 1-20 by sex and half-year age groups as shown in tables 28-30, and smoothed percentile curves were derived for children aged 2-18 years. The data for the smoothed percentile triceps skinfold, subscapular skinfold, and upper arm girth curves for children aged 2-18 years by sex and half-year age groups are presented in tables 31-33; the corresponding smoothed percentile curves are shown in figures 5-10.

The skinfold thickness percentiles provide distributions of these measures among the U.S. population of children and youth ages 2-18 years from 1963-74. The general concensus is that some proportion of the U.S. population in both children and adults is probably too fat. Presently, it is inappropriate to conclude that a skinfold thickness above or below some arbitrary percentile or number is unacceptable; available data are insufficient to define or validate risks of relative fatness. We do know that the subscapular skinfold correlates better with serum total cholesterol, HDL-cholesterol, triglycerides, and blood pressure than the triceps skinfold does.<sup>14-15</sup> We also know that both the triceps and subscapular skinfolds seem to correlate better with estimates of total body fat in children than weight, height, weight-for-height ratios, or power functions of weight and height do.<sup>16-19</sup>

From examination of central data, that is, the 25th to 75th percentiles, the secular change among children of the same sex and age examined in 1963-65 and 1971-74 does not appear to have been significant. This finding suggests that these percentiles, which incorporate both periods, can provide useful references for comparisons with other populations of children such as those included in nutrition surveys or in nutrition surveillance programs.

With the merger of data from NHES II, NHES III, and NHANES I, reasonable numbers of children represented in the given age and sex groups exist. Still, the percentile curves as presented have been smoothed considerably from the observed data.

This finding is especially true at the 5th, 10th, 90th, and 95th percentiles. Clinical emphasis in use of these skinfold curves will be focused largely at the extremes, that is, is this child too fat or too skinny? However, considerable caution must be exercised in use of these reference data to avoid identifying or labelling individual children included in surveys or screening programs as excessively lean (thin) or fat (obese) on the basis of single skinfold measurements.

It is more difficult to measure triceps or subscapular skinfolds in the infant than in the older child or adolescent. The clinician dealing with

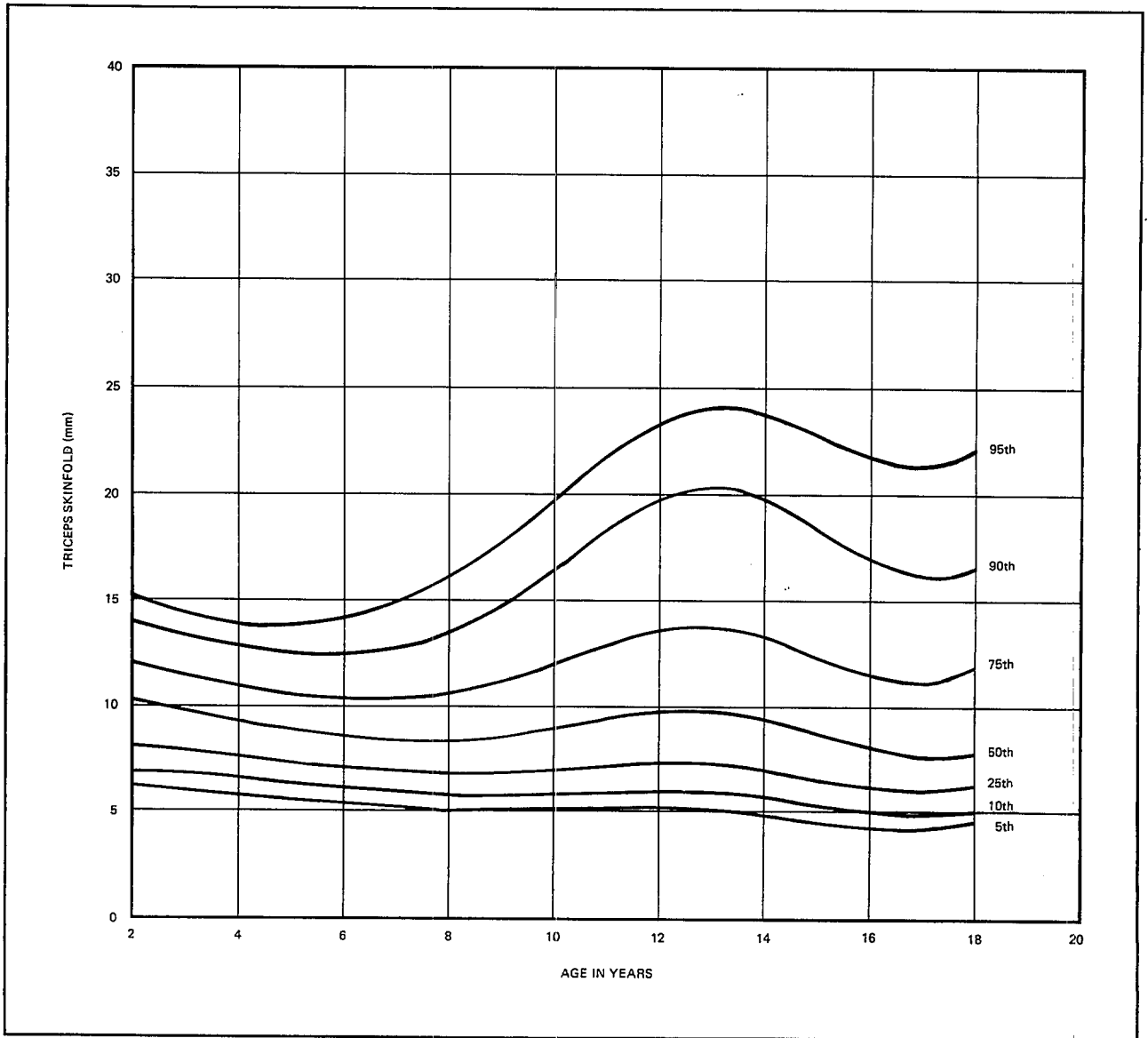


Figure 5. Smoothed percentiles of triceps skinfold for boys ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

preschool children and preadolescents may prefer to measure weight and height periodically and measure skinfolds only when weight-for-height shows a trend towards higher percentiles. Skinfolds should be measured periodically throughout childhood, thereby providing a potentially useful indicator of the trend of relative fatness in the individual child. Knowledge of this trend during the preadolescent years may be helpful in interpreting skinfold thickness measurements during adolescence.

Although these percentiles constitute distributions of triceps and subscapular skinfold thickness for U.S. children at various ages, they should not be interpreted as fat growth curves. Differences in fatness reflecting racial and socioeconomic differences are obscured within these percentiles. This situation is especially true during adolescence where differences in relative fatness in individuals of the same sex, chronological age, race, and socioeconomic status are found. These differences in relative fatness re-

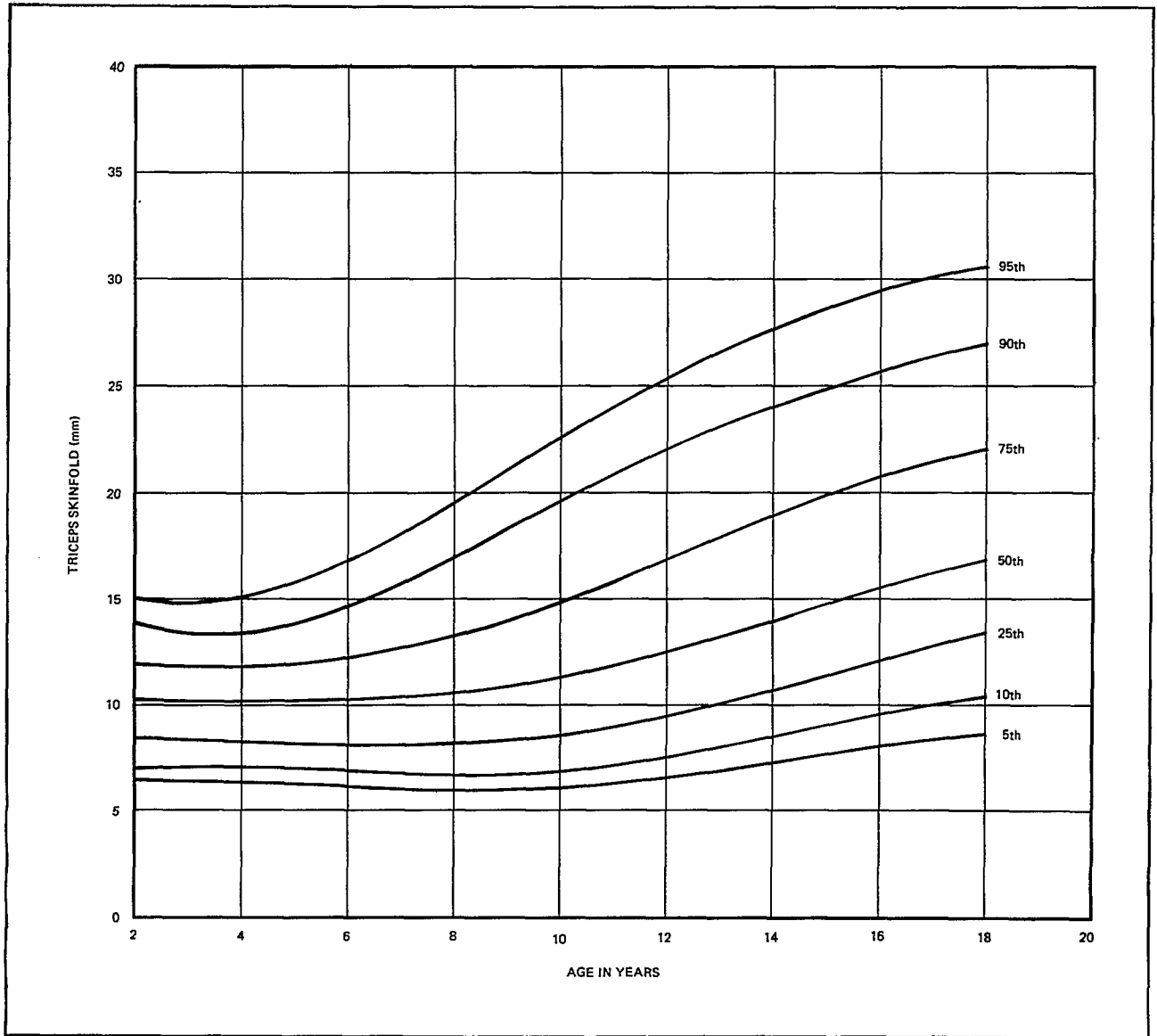


Figure 6. Smoothed percentiles of triceps skinfold for girls ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

flect differences in maturation with the early-maturing individual tending to manifest the pre-adolescent "fat growth spurt" sooner than the late-maturing individual.

### Goniometric Measurements

A description of the measuring techniques and diagrams used in the goniometric examination is located in appendix IV.

*Extension of right and left hip.*—About 90 percent of the adult population is capable of ex-

tending each hip in the range of 170-150 degrees (tables 34 and 35). Of those individuals incapable of extending their right hip into the range of 175 degrees or less (e.g., who could move it no more than 5 degrees from the 180 degree plane), approximately 6.4 percent are females, 3.4 percent are males, 4.5 percent are white, and 9.7 percent are black. Of those incapable of extending their left hip less than 175 degrees, approximately 5.5 percent are females, 2.1 percent are males, 3.4 percent are white, and 8.4

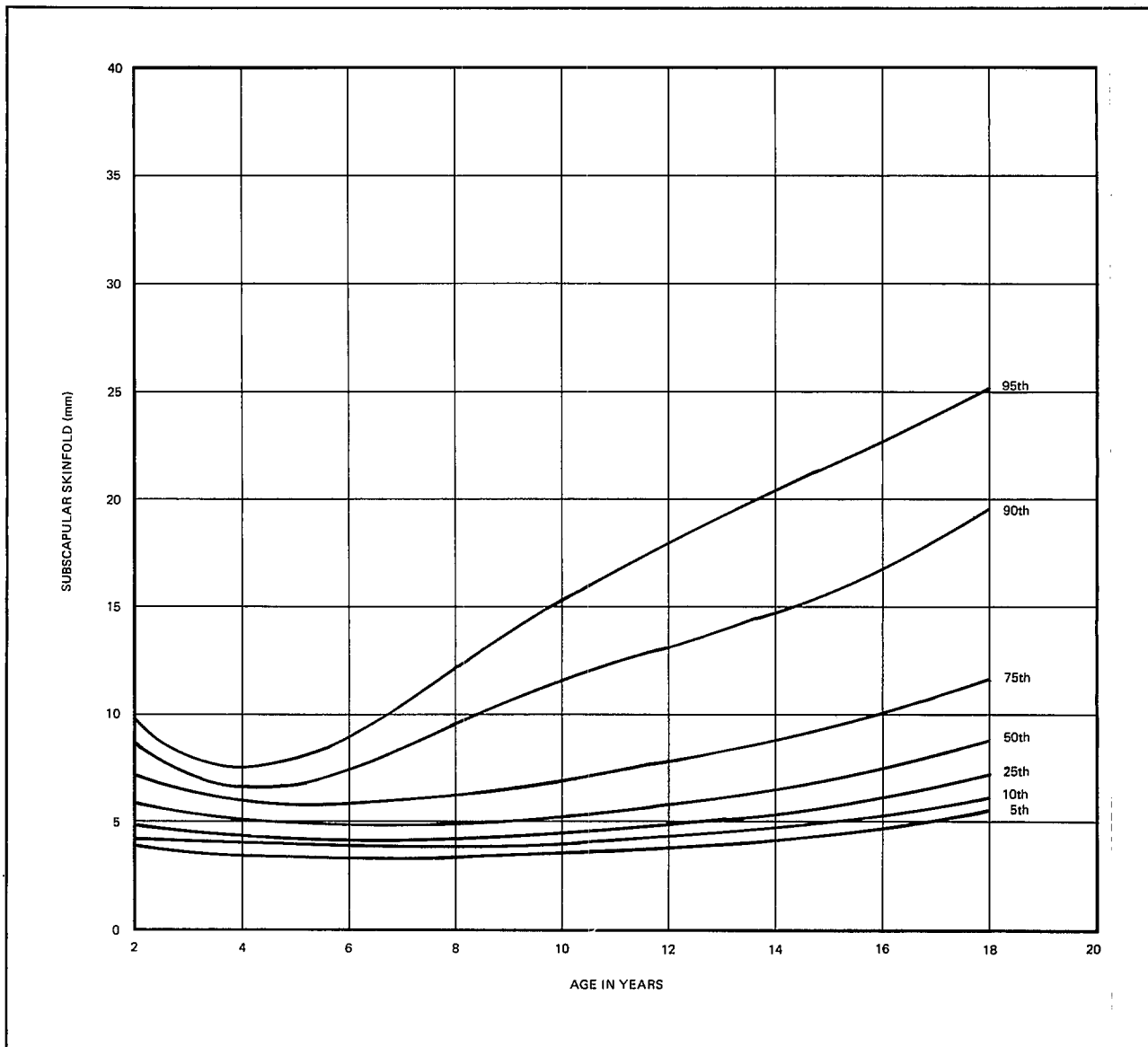


Figure 7. Smoothed percentiles of subscapular skinfold for boys ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

percent are black. In general, a larger proportion of females and white adults are capable of extending their hips through a larger arc (as measured here a smaller angle) than males and black adults.

*Abduction of right and left hip.*—Tables 36 and 37 show that 16.3 percent of adults can abduct either hip 145 degrees or more.

*Flexion of right and left hip.*—Tables 38 and 39 present findings on the flexion of the right and left hip. About 25 percent of the black population, compared with about 49 percent of

the white population, have flexion of the right hip less than 60 degrees. Correspondingly, for the left flexion, the proportions were 31 and 50 percent, respectively. Noted is the tremendous difference in the proportions between black and white persons who are capable of flexing their hips to small angles. There is virtually no difference in the proportions for males and females with flexion of the right or left hip less than 60 degrees.

*Internal and external rotation of the right and left hip.*—Eighty-seven percent of the adults



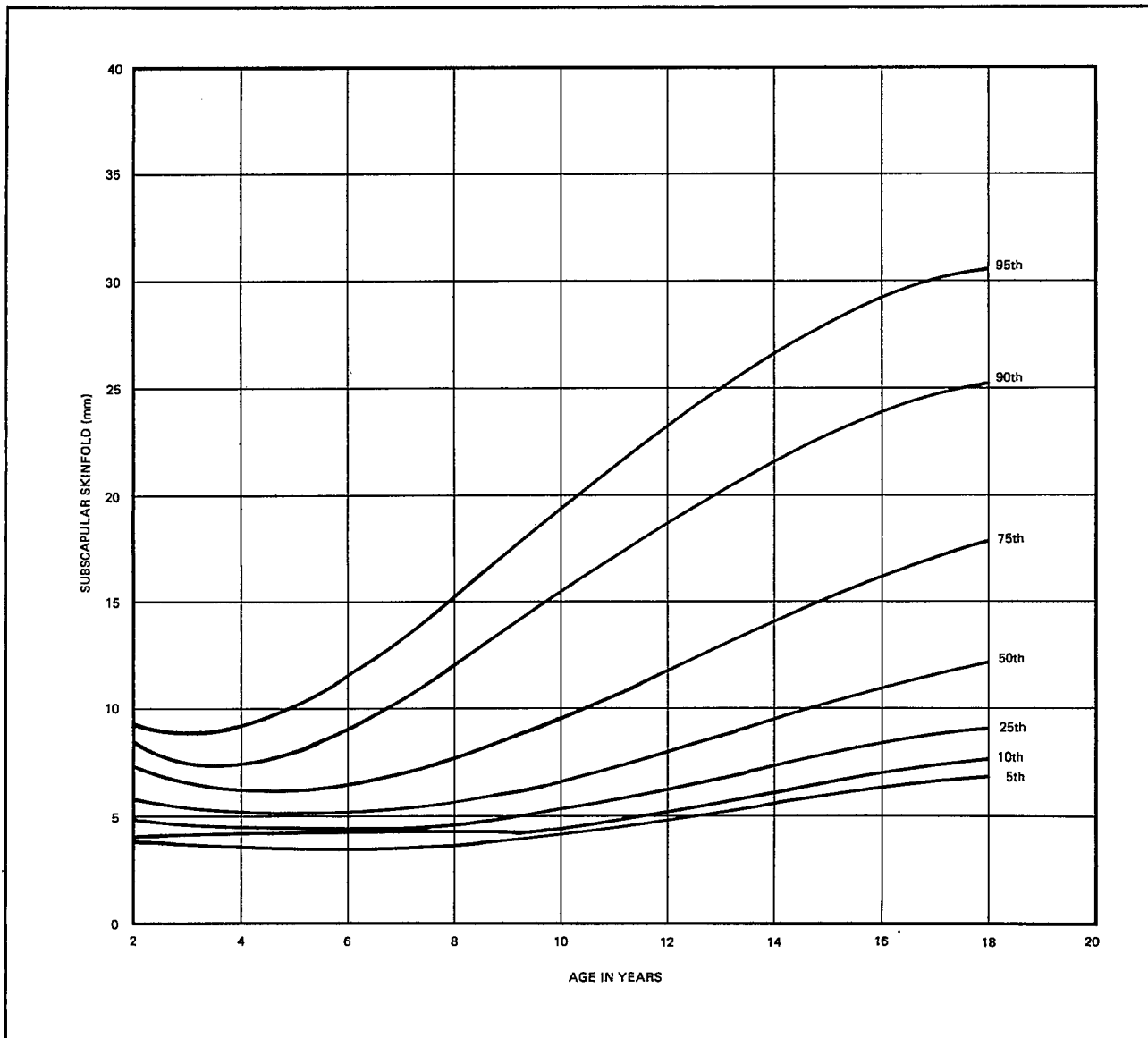


Figure 8. Smoothed percentiles of subscapular skinfold for girls ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

can internally rotate their right hip between 50 and 70 degrees (table 40); correspondingly, about 84 percent can externally rotate their left hip between 50 and 70 degrees (table 41). Table 42 shows that 46 percent of the adults are capable of externally rotating their right hip between 120 and 125 degrees; the proportion is comparable for internal rotation of the left hip—about 50 percent (table 43).

*Flexion of right and left knee.*—In general, white adults are more capable of flexing their knees to smaller angles than black adults. About

90 and 80 percent, respectively, can flex their right knees to less than 60 degrees (table 44). Table 45 shows that the difference in the proportions is even larger for the left knee (about 90 and 77 percent, respectively). However, if flexion less than 70 degrees is considered, there are virtually no differences between the races. In each of the flexion categories, the proportions achieving small angles generally decreases with age, reflecting that the proportions with poor flexion of the knees is higher in the older age groups, particularly ages 65-74 years.

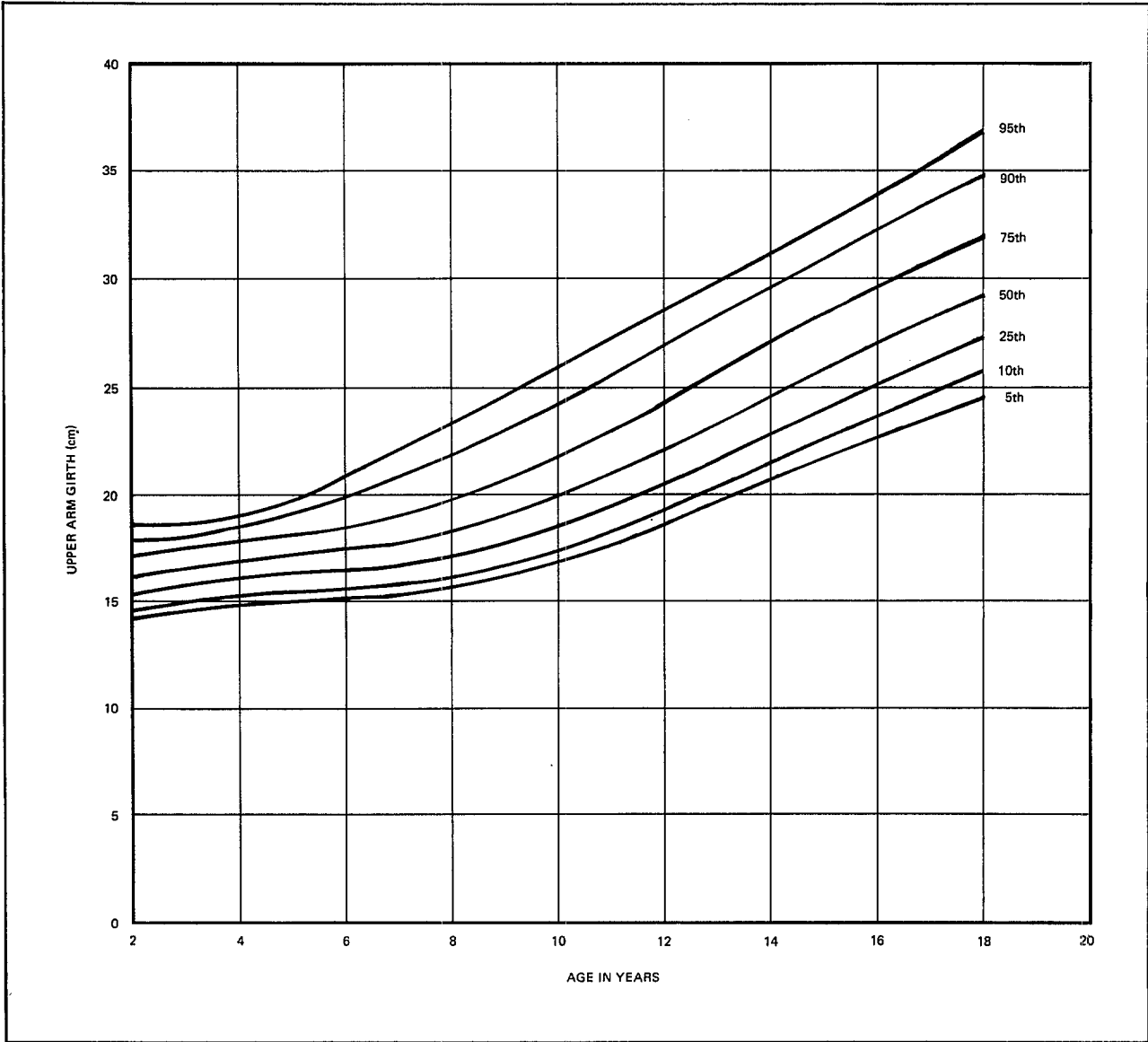


Figure 9. Smoothed percentiles of upper arm girth for boys ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

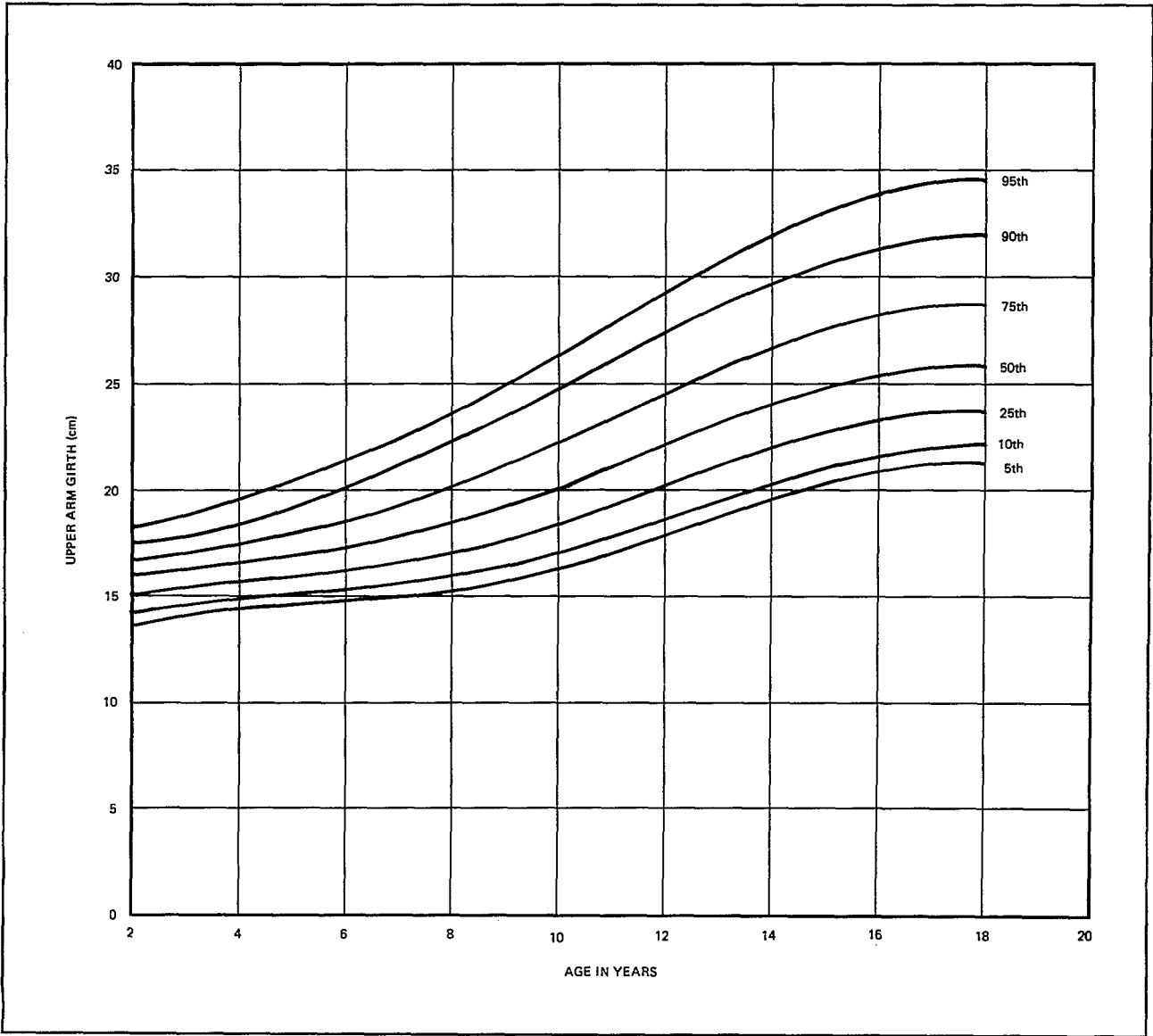


Figure 10. Smoothed percentiles of upper arm girth for girls ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74



## REFERENCES

- <sup>1</sup>National Center for Health Statistics: Plan and operation of the Health and Nutrition Examination Survey, United States, 1971-73, by H. W. Miller. *Vital and Health Statistics*. Series 1-Nos. 10a and 10b. DHEW Pub. No. (HRA) 77-1310. Health Resources Administration. Washington. U.S. Government Printing Office, Feb. 1973. Reprinted in Dec. 1978.
- <sup>2</sup>National Center for Health Statistics: Plan and operation of the HANES I Augmentation Survey of adults 25-74 years, United States, 1974-75, by A. Engle, R. Murphy, K. Mauer, and E. Collins. *Vital and Health Statistics*. Series 1-No. 14. DHEW Pub. No. (PHS) 78-1314. Public Health Service. Washington. U.S. Government Printing Office, June 1978.
- <sup>3</sup>National Center for Health Statistics: Current Listing and topical index to the Vital and Health Statistics series 1962-1978. DHEW Pub. No. (PHS) 79-1301. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1979.
- <sup>4</sup>National Center for Health Statistics: Weight by height and age for adults 18-74 years, United States, 1971-74, by S. Abraham, C. L. Johnson, and M. F. Najjar. *Vital and Health Statistics*. Series 11-No. 208. DHEW Pub. No. (PHS) 79-1656. Public Health Service. Washington. U.S. Government Printing Office, Sept. 1979.
- <sup>5</sup>National Center for Health Statistics: Weight and height of adults 18-74 years of age, United States, 1971-74, by S. Abraham, C. L. Johnson, and M. F. Najjar. *Vital and Health Statistics*. Series 11-No. 211. DHEW Pub. No. (PHS) 79-1659. Public Health Service. Washington. U.S. Government Printing Office, May 1979.
- <sup>6</sup>National Center for Health Statistics: Overweight adults in the United States, by S. Abraham, and C. L. Johnson. *Advance Data from Vital and Health Statistics*, No. 51 DHEW Pub. No. (PHS) 79-1250. Public Health Service. Hyattsville, Md. Aug. 30, 1979.
- <sup>7</sup>Abraham, S., and Johnson, C. L.: Prevalence of severe obesity in adults in the United States. *Am. J. Clin. Nutr. Supp.* 33, 364-369, Feb. 1980.
- <sup>8</sup>National Center for Health Statistics: NCHS growth curves for children birth-18 years, United States, by P. V. V. Hamill, T. A. Drizd, C. L. Johnson, R. B. Reed, and A. F. Roche. *Vital and Health Statistics*. Series 11-No. 165. DHEW Pub. No. (PHS) 78-1650. Public Health Service. Washington, U.S. Government Printing Office, Nov. 1977.
- <sup>9</sup>Committee on Nutritional Anthropometry, Food and Nutrition Board, National Research Council: Recommendations concerning body measurements for the characterization of nutritional status, in J. Brozek, ed., *Body Measurements and Human Nutrition*. Detroit, Mich. pg. 1-13. Wayne University Press, 1956.
- <sup>10</sup>Owen, G. M., and Brozek, J.: Influence of age, sex, and nutrition on body composition during childhood and adolescence, in F. Falkner, ed., *Human Development*. Philadelphia. Saunders, 1966. pp. 222-238.
- <sup>11</sup>Keys, A., and Grande, F.: Body weight, body composition and calorie status, in M. G. Wohl and R. S. Goodhart, eds., *Modern Nutrition in Health and Disease*. Philadelphia. Lea and Febiger, 1968. pp. 3-30.
- <sup>12</sup>Malina, R. M.: Quantification of fat, muscle, and bone in man. *Clin. Orthop.* 65:9-38, July-Aug. 1969.
- <sup>13</sup>Weiner, J. S., and Lourie, J. A. (eds.): *Human Biology, A Guide to Field Methods*. IBP Handbook No. 9. Oxford. Blackwell, 1969.
- <sup>14</sup>Garn, S. M., Bailey, S. M., and Block, W. D.: Relationships between fatness and lipid levels in adults. *Am. J. Clin. Nutr.* 32(4):733-735, Apr. 1979.
- <sup>15</sup>Steine, O. C., Harper, J. B., and Greenstreet: Correlation of blood pressure with skinfold thickness in protein levels. *Am. J. Dis. Child.* 129:905-911, 1975.
- <sup>16</sup>Womersley, J., and Durnin, J. V. G. A.: A comparison of skinfold method with extent of "overweight" and various weight-height relationships in the assessment of obesity. *Br. J. Nutr.* 38:271-284, 1977.
- <sup>17</sup>Weil, W. B., Jr.: Current controversies in childhood obesity. *J. Pediatr.* 91(2):178-187, Aug. 1977.
- <sup>18</sup>Roche, A. F.: Postnatal growth of adipose tissue in man. *J. Stud. Phys. Anthropol.* (Warsaw) 5:53-73, 1979.
- <sup>19</sup>Himes, J. H.: Subcutaneous fat thickness as an indicator of nutritional status, in L. S. Greene and F. E. Johnston eds., *Social and Biological Predictors of Nutritional Status, Physical Growth, and Neurological Development*. New York. 1980.
- <sup>20</sup>National Center for Health Statistics: Replication, an approach to the analysis of data from complex surveys. *Vital and Health Statistics*. PHS Pub. No. 1000-Series 2-No. 14. Public Health Service. Washington. U.S. Government Printing Office, Apr. 1966.

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TABLE 1. NUMBER OF MALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR TRICEPS SKINFOLD, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<u>ALL RACES<sup>1</sup></u>					TRICEPS SKINFOLD IN MILLIMETERS								
1 YEAR.....	286	1,693	10.4	3.1	6.0	7.0	7.5	8.0	10.0	12.0	14.0	15.0	16.0
2 YEARS.....	298	1,747	10.0	2.7	6.0	6.5	7.0	8.0	10.0	12.0	12.5	13.5	15.0
3 YEARS.....	308	1,807	9.9	2.7	6.5	7.0	7.0	8.0	10.0	11.0	12.5	13.1	14.5
4 YEARS.....	304	1,815	9.4	2.5	5.0	6.5	7.0	8.0	9.0	11.0	12.0	12.5	14.0
5 YEARS.....	273	1,563	9.5	3.3	5.0	6.0	7.0	7.0	9.0	11.0	12.5	13.5	15.0
6 YEARS.....	179	1,673	8.6	3.0	5.0	5.5	6.0	6.5	8.0	10.0	12.0	12.0	14.0
7 YEARS.....	164	1,979	8.9	3.5	4.0	5.0	6.0	6.5	8.0	10.0	12.0	13.0	15.5
8 YEARS.....	152	1,861	9.0	3.3	5.0	5.5	6.0	6.5	8.0	10.0	12.0	13.0	16.0
9 YEARS.....	169	2,019	10.6	4.8	5.0	6.0	6.5	7.0	9.0	14.0	17.0	17.0	19.0
10 YEARS.....	184	2,205	10.9	4.4	5.5	6.0	6.0	8.0	10.0	13.5	15.0	17.0	19.5
11 YEARS.....	178	2,177	11.9	6.4	5.0	6.0	6.0	7.5	10.0	14.5	18.0	20.0	24.0
12 YEARS.....	200	2,304	11.9	6.3	4.5	6.0	6.5	8.0	10.5	13.5	16.5	20.0	27.0
13 YEARS.....	174	1,978	11.2	6.6	5.0	5.0	5.5	7.0	10.0	13.0	19.0	22.0	25.0
14 YEARS.....	174	2,030	10.3	6.2	4.0	5.0	5.5	6.5	8.0	12.0	16.5	19.0	22.5
15 YEARS.....	171	2,093	10.0	6.1	4.0	5.0	5.0	6.0	8.0	11.5	15.0	19.0	23.5
16 YEARS.....	169	2,019	9.7	5.2	4.0	5.0	5.0	6.0	8.0	12.0	14.0	17.0	22.0
17 YEARS.....	176	2,095	9.2	5.4	4.0	5.0	5.0	6.0	7.5	11.0	12.5	15.0	19.0
<u>WHITE</u>													
1 YEAR.....	211	1,402	10.7	3.0	7.0	7.0	7.5	8.0	10.0	12.0	14.0	15.0	16.5
2 YEARS.....	217	1,461	9.9	2.6	6.0	6.5	7.0	8.0	10.0	12.0	12.5	13.0	14.7
3 YEARS.....	226	1,536	9.9	2.6	6.5	7.0	7.0	8.0	10.0	11.0	12.5	13.5	14.5
4 YEARS.....	229	1,547	9.6	2.4	6.0	7.0	7.0	8.0	10.0	11.0	12.0	12.5	14.0
5 YEARS.....	207	1,319	9.8	3.2	6.0	6.5	7.0	7.5	9.0	11.0	12.5	13.5	15.0
6 YEARS.....	126	1,343	8.9	3.1	5.5	5.6	6.0	7.0	9.0	10.0	12.0	12.5	14.0
7 YEARS.....	125	1,718	9.1	3.5	5.0	6.0	6.0	7.0	8.0	10.5	12.0	13.5	17.0
8 YEARS.....	116	1,644	9.1	3.3	5.0	5.5	6.0	7.0	8.5	10.5	12.0	13.0	16.0
9 YEARS.....	117	1,636	11.1	4.8	5.5	6.5	6.5	7.5	10.0	14.0	17.0	17.0	19.0
10 YEARS.....	148	1,909	12.1	4.2	5.5	6.0	7.0	8.0	10.0	14.0	15.5	17.0	19.5
11 YEARS.....	132	1,823	11.5	6.5	6.0	6.0	7.0	8.0	10.0	15.0	19.0	20.5	24.5
12 YEARS.....	152	1,970	12.4	6.1	6.0	6.0	7.0	8.5	11.0	14.0	18.0	21.0	27.0
13 YEARS.....	129	1,697	11.7	6.7	5.0	5.0	6.0	7.0	10.0	14.0	19.0	22.0	25.5
14 YEARS.....	134	1,730	10.9	6.4	4.0	5.0	6.0	7.0	9.0	13.0	18.0	20.0	24.0
15 YEARS.....	124	1,728	10.2	6.1	4.0	5.0	6.0	6.0	8.0	12.0	15.0	19.0	24.0
16 YEARS.....	128	1,752	10.1	5.2	4.0	5.0	5.0	6.5	9.0	12.5	15.0	17.0	22.0
17 YEARS.....	139	1,831	9.3	5.4	4.5	5.0	5.5	6.0	7.5	11.0	13.0	15.0	19.0
<u>BLACK</u>													
1 YEAR.....	72	280	9.4	3.4	4.5	6.0	7.0	8.0	8.0	11.0	12.0	13.0	15.0
2 YEARS.....	77	267	10.1	3.2	4.5	6.0	6.5	8.0	10.0	12.0	14.0	15.0	15.0
3 YEARS.....	72	212	9.1	2.6	6.0	6.5	6.5	7.0	9.0	10.5	12.0	12.0	13.0
4 YEARS.....	74	260	8.0	2.6	5.0	5.0	5.0	6.5	7.0	9.0	10.0	10.5	15.0
5 YEARS.....	64	226	7.7	3.4	4.5	5.0	5.0	5.0	7.0	9.0	10.0	12.0	15.5
6 YEARS.....	52	321	7.1	1.8	4.0	4.0	5.0	6.0	7.0	8.0	9.0	9.0	9.0
7 YEARS.....	38	253	7.5	3.2	4.0	4.0	4.0	5.0	6.5	9.0	11.5	13.0	15.0
8 YEARS.....	33	203	7.8	3.4	4.0	5.0	5.0	6.0	6.5	10.0	11.0	11.0	12.5
9 YEARS.....	52	383	8.2	3.9	3.5	4.0	4.5	6.0	7.0	8.0	12.0	13.0	18.0
10 YEARS.....	33	251	9.1	5.3	5.0	5.0	6.0	6.0	7.5	10.0	13.0	15.0	20.0
11 YEARS.....	43	313	8.0	5.0	4.0	4.0	5.0	5.0	6.0	8.5	11.0	12.0	15.0
12 YEARS.....	47	316	9.4	7.0	4.0	4.0	4.5	6.0	7.5	10.7	11.0	15.0	24.0
13 YEARS.....	45	281	8.2	4.4	4.0	5.0	5.0	5.0	7.0	8.5	11.0	19.0	19.0
14 YEARS.....	39	282	6.6	2.6	3.5	3.5	3.5	5.0	6.5	7.0	8.0	9.0	12.0
15 YEARS.....	43	310	8.9	6.1	4.0	4.5	5.0	5.0	6.5	9.0	10.0	21.0	21.0
16 YEARS.....	41	267	7.2	4.8	4.0	4.0	4.0	5.0	6.0	7.5	8.0	11.0	15.0
17 YEARS.....	35	235	8.7	5.8	3.5	3.5	5.0	5.0	7.0	10.5	12.0	12.0	23.2

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.



TABLE 2. NUMBER OF FEMALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR TRICEPS SKINFOLD, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
TRICEPS SKINFOLD IN MILLIMETERS													
<u>ALL RACES<sup>1</sup></u>													
1 YEAR.....	267	1,620	10.1	2.8	6.0	6.5	7.0	8.0	10.0	12.0	13.0	14.0	15.0
2 YEARS.....	272	1,708	10.5	2.5	7.0	7.5	8.0	9.0	10.0	12.0	13.5	14.0	15.0
3 YEARS.....	292	1,701	10.9	2.7	6.0	7.0	8.0	9.0	11.0	12.5	13.5	14.0	15.0
4 YEARS.....	281	1,599	10.5	2.7	7.0	7.5	8.0	8.0	10.0	12.0	13.0	14.0	15.0
5 YEARS.....	314	1,695	10.5	3.8	6.0	7.0	7.0	8.0	10.0	12.0	13.0	15.0	17.5
6 YEARS.....	176	1,787	10.3	3.3	6.0	6.5	7.0	8.0	10.0	12.0	13.0	13.5	15.0
7 YEARS.....	169	1,754	10.8	4.2	4.0	6.0	7.0	8.0	10.5	12.0	15.0	16.0	18.0
8 YEARS.....	152	1,800	12.3	4.8	6.5	8.0	8.0	9.0	11.0	15.0	17.0	18.0	22.5
9 YEARS.....	171	2,017	13.2	4.8	7.0	7.5	8.0	10.0	12.5	16.0	18.0	20.0	22.0
10 YEARS.....	197	2,173	13.1	5.0	7.0	8.0	8.0	9.5	12.0	15.5	19.0	20.0	23.0
11 YEARS.....	166	1,911	14.5	6.2	7.0	8.0	8.5	10.0	13.0	18.0	20.5	23.5	28.5
12 YEARS.....	177	1,812	15.0	5.9	7.5	8.0	9.0	10.5	14.0	18.5	20.0	23.0	27.0
13 YEARS.....	198	2,175	16.2	6.8	7.0	8.0	10.0	11.5	15.0	20.0	24.0	25.0	30.0
14 YEARS.....	184	2,036	17.5	7.3	8.5	9.5	10.0	13.0	16.0	21.0	24.0	27.0	33.0
15 YEARS.....	171	2,163	17.0	7.0	8.0	10.0	11.0	12.0	16.0	20.5	23.0	25.0	28.5
16 YEARS.....	175	2,145	18.2	6.7	10.0	10.5	12.0	13.5	17.0	21.0	24.0	26.0	32.5
17 YEARS.....	157	1,804	19.6	8.1	10.0	11.5	12.0	13.0	19.0	24.0	26.5	29.5	35.0
<u>WHITE</u>													
1 YEAR.....	189	1,328	10.2	2.8	6.0	7.0	7.0	8.0	10.0	12.0	13.0	13.5	15.5
2 YEARS.....	203	1,434	10.6	2.6	7.0	7.5	8.0	9.0	10.0	12.0	13.5	14.0	15.0
3 YEARS.....	211	1,438	11.1	2.6	7.0	8.0	8.5	9.0	11.0	13.0	13.5	14.0	15.0
4 YEARS.....	204	1,339	10.8	2.6	7.5	8.0	8.0	9.0	10.5	12.0	13.0	14.5	16.0
5 YEARS.....	224	1,416	10.7	3.7	6.0	7.0	8.0	8.5	10.0	12.0	13.0	15.0	17.5
6 YEARS.....	125	1,445	10.6	3.3	6.5	7.0	7.5	8.0	10.5	12.0	13.0	14.0	16.0
7 YEARS.....	122	1,507	10.9	4.2	4.0	6.0	7.0	8.0	11.0	12.0	15.0	15.5	17.5
8 YEARS.....	117	1,507	12.4	4.7	7.0	8.0	8.0	9.0	11.5	15.0	16.5	18.0	22.0
9 YEARS.....	129	1,751	13.6	4.6	7.5	8.0	9.0	10.0	13.0	16.0	18.0	20.0	22.0
10 YEARS.....	148	1,855	13.4	4.8	7.5	8.0	8.5	10.0	12.5	15.5	19.0	20.0	23.0
11 YEARS.....	122	1,569	14.9	6.1	8.0	8.5	9.0	10.0	13.0	17.5	20.5	24.5	28.5
12 YEARS.....	128	1,506	15.2	5.6	8.0	9.0	10.0	11.0	14.0	18.5	20.0	23.0	26.0
13 YEARS.....	153	1,886	16.2	6.8	7.0	8.0	10.0	11.5	15.0	20.0	24.0	25.0	28.5
14 YEARS.....	132	1,731	17.8	7.3	9.0	9.5	10.5	13.0	16.7	21.0	24.0	28.5	33.0
15 YEARS.....	125	1,752	17.7	6.7	9.0	10.5	11.0	13.0	17.0	21.0	24.0	25.0	28.5
16 YEARS.....	141	1,933	18.2	6.6	10.0	10.5	12.5	14.0	17.0	21.0	24.0	26.0	32.1
17 YEARS.....	117	1,549	19.8	8.0	10.0	12.0	12.5	13.5	19.0	24.0	26.5	29.5	35.0
<u>BLACK</u>													
1 YEAR.....	73	257	10.0	3.0	5.5	5.5	7.0	8.0	10.0	12.0	13.0	14.0	15.0
2 YEARS.....	66	261	10.0	2.3	7.0	8.0	8.0	8.0	10.0	11.0	12.0	14.0	15.5
3 YEARS.....	78	245	9.7	2.9	6.0	7.0	7.0	8.0	10.0	11.0	12.0	13.0	14.0
4 YEARS.....	73	246	8.8	2.7	5.0	6.0	7.0	7.0	8.0	10.5	12.0	13.0	14.0
5 YEARS.....	88	265	9.4	3.9	5.0	5.0	6.5	7.0	8.0	10.0	12.0	13.5	17.0
6 YEARS.....	50	336	9.0	3.1	5.5	6.0	6.0	8.0	8.0	10.0	11.5	12.0	13.0
7 YEARS.....	46	241	10.1	4.0	5.0	6.0	7.0	7.5	9.0	11.0	17.5	18.0	18.0
8 YEARS.....	35	293	11.5	5.1	5.0	6.5	7.0	8.0	10.0	13.5	18.0	18.0	23.0
9 YEARS.....	41	247	10.2	5.1	5.5	6.0	6.0	6.5	8.0	12.0	18.0	18.0	20.0
10 YEARS.....	48	303	11.7	5.6	6.5	6.5	7.0	7.5	10.0	16.0	18.0	19.0	24.0
11 YEARS.....	42	315	12.7	6.4	4.0	5.0	6.5	7.5	10.0	18.0	22.0	23.0	23.0
12 YEARS.....	47	284	13.6	7.6	5.5	6.0	6.0	7.5	12.0	17.0	22.0	25.0	30.0
13 YEARS.....	44	287	16.1	7.0	7.0	8.5	10.0	11.0	14.0	18.0	24.0	24.0	33.5
14 YEARS.....	50	265	15.9	6.7	8.0	8.0	9.0	10.5	14.0	20.5	24.0	24.5	24.5
15 YEARS.....	46	411	14.0	7.6	6.5	6.5	8.0	10.0	12.5	16.0	16.5	20.0	32.8
16 YEARS.....	33	203	18.9	8.0	8.0	8.0	10.0	12.0	19.0	24.0	24.5	33.0	33.1
17 YEARS.....	39	239	16.9	6.6	7.5	9.0	11.0	12.0	14.5	20.0	24.0	28.0	31.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 3. NUMBER OF MALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR TRICEPS SKINFOLD, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
TRICEPS SKINFOLD IN MILLIMETERS													
<u>ALL RACES<sup>1</sup></u>													
18-74 YEARS...	5,261	61,180	12.0	5.9	4.5	6.0	6.5	8.0	11.0	15.0	18.0	20.0	23.0
18-19 YEARS.....	260	3,673	11.0	6.1	4.5	5.0	6.0	7.0	8.5	15.0	18.0	19.5	23.5
20-24 YEARS.....	513	8,110	11.2	6.2	4.0	5.0	6.0	7.0	10.0	14.0	17.5	20.0	23.0
25-34 YEARS.....	804	13,003	12.6	6.4	4.5	5.5	6.0	8.0	12.0	16.0	18.5	21.5	24.0
35-44 YEARS.....	664	10,676	12.4	5.5	5.0	6.0	7.0	8.5	12.0	15.5	17.5	20.0	23.0
45-54 YEARS.....	765	11,150	12.4	5.9	5.0	6.0	7.0	8.0	11.0	15.0	18.0	20.0	25.5
55-64 YEARS.....	598	9,073	11.6	5.2	5.0	6.0	6.5	8.0	11.0	14.0	16.5	18.0	21.5
65-74 YEARS.....	1,657	5,496	11.8	5.5	4.5	5.5	6.5	8.0	11.0	15.0	17.0	19.0	22.0
<u>WHITE</u>													
18-74 YEARS.....	4,344	54,694	12.2	5.8	5.0	6.0	6.5	8.0	11.0	15.0	18.0	20.0	23.0
18-19 YEARS.....	203	3,206	11.3	5.9	5.0	5.5	6.0	7.0	9.0	15.0	18.0	20.0	23.0
20-24 YEARS.....	423	7,094	11.5	6.0	4.0	5.0	6.0	7.0	10.0	15.0	18.0	21.0	23.0
25-34 YEARS.....	672	11,594	12.7	6.2	5.0	6.0	6.5	8.0	12.0	16.0	18.5	21.0	24.0
35-44 YEARS.....	569	9,516	12.6	5.4	5.0	6.0	7.0	9.0	12.0	15.5	17.5	20.0	23.0
45-54 YEARS.....	628	10,039	12.6	5.9	5.5	6.5	7.0	8.5	11.0	15.0	18.0	20.0	26.0
55-64 YEARS.....	505	8,275	11.7	5.0	5.0	6.0	7.0	8.0	11.0	14.0	16.5	18.0	21.0
65-74 YEARS.....	1,344	4,970	12.0	5.4	5.0	6.0	7.0	8.0	11.0	15.0	17.0	19.0	22.0
<u>BLACK</u>													
18-74 YEARS.....	847	5,753	10.6	7.0	3.5	4.0	4.5	6.0	8.5	13.0	16.0	20.0	23.0
18-19 YEARS.....	52	404	8.9	6.7	2.0	4.0	5.0	5.1	7.0	8.0	12.0	21.0	24.0
20-24 YEARS.....	80	866	10.0	7.9	3.0	4.0	4.0	6.0	8.0	11.0	13.0	18.0	24.0
25-34 YEARS.....	119	1,232	11.8	8.4	4.0	4.0	4.0	5.0	10.0	15.0	20.0	22.0	23.0
35-44 YEARS.....	87	1,005	11.3	6.5	4.0	4.5	5.0	7.0	10.0	14.0	17.0	18.4	22.0
45-54 YEARS.....	130	1,057	10.0	5.1	4.0	4.0	5.0	6.0	10.0	12.5	14.0	16.0	20.0
55-64 YEARS.....	85	703	10.7	7.2	3.0	4.0	4.5	5.0	8.0	14.0	20.0	22.0	26.0
65-74 YEARS.....	294	486	9.7	5.4	4.0	4.5	5.0	6.0	9.0	12.0	14.0	15.0	19.5

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 4. NUMBER OF FEMALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR TRICEPS SKINFOLD, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
TRICEPS SKINFOLD IN MILLIMETERS													
<u>ALL RACES<sup>1</sup></u>													
18-74 YEARS...	8,410	67,837	23.0	8.4	11.0	13.0	14.0	17.0	22.0	28.0	32.0	34.0	37.5
18-19 YEARS.....	280	3,679	18.6	6.8	9.0	11.0	12.0	14.0	17.5	22.0	24.0	27.0	32.0
20-24 YEARS.....	1,243	9,215	19.7	7.8	10.0	11.0	12.0	14.0	18.0	24.0	27.9	30.5	34.5
25-34 YEARS.....	1,896	13,933	21.9	8.2	10.5	12.0	13.5	16.0	21.0	26.5	30.5	33.5	37.0
35-44 YEARS.....	1,664	11,593	24.0	8.4	12.0	14.0	16.0	18.0	23.0	29.5	32.5	35.5	39.0
45-54 YEARS.....	836	12,163	25.4	8.3	13.0	15.0	17.0	20.0	25.0	30.0	34.0	36.0	40.0
55-64 YEARS.....	669	9,976	24.9	8.5	11.0	14.0	16.0	19.0	25.0	30.5	33.0	35.0	39.0
65-74 YEARS.....	1,822	7,277	23.3	7.5	11.5	14.0	16.0	18.0	23.0	28.0	31.0	33.0	36.0
<u>WHITE</u>													
18-74 YEARS.....	6,757	59,923	22.9	8.1	11.0	13.0	14.5	17.0	22.0	28.0	31.0	34.0	37.0
18-19 YEARS.....	208	3,156	18.9	6.6	9.5	12.0	13.0	14.5	18.0	22.5	24.0	26.5	33.5
20-24 YEARS.....	956	7,972	19.8	7.7	10.0	11.0	12.0	14.0	19.0	24.0	27.9	30.5	34.0
25-34 YEARS.....	1,539	12,161	21.8	8.0	11.0	12.5	14.0	16.0	20.5	26.0	30.0	33.0	36.5
35-44 YEARS.....	1,302	10,111	23.7	8.3	12.0	14.0	15.9	18.0	22.5	29.0	32.0	35.1	38.5
45-54 YEARS.....	705	10,879	25.3	8.1	13.0	15.0	17.0	20.0	25.0	30.0	33.5	35.5	39.5
55-64 YEARS.....	551	9,037	24.6	7.9	11.5	14.5	16.0	19.0	24.0	30.0	33.0	34.1	38.0
65-74 YEARS.....	1,496	6,603	23.3	7.3	12.0	14.0	16.0	18.0	23.0	28.0	31.0	33.0	35.5
<u>BLACK</u>													
18-74 YEARS.....	1,557	7,302	23.7	10.3	9.0	11.0	12.0	15.5	23.0	30.5	34.0	36.6	41.0
18-19 YEARS.....	70	504	16.2	7.3	8.0	9.0	9.0	11.5	14.0	20.0	25.0	29.0	32.0
20-24 YEARS.....	259	1,073	19.3	8.7	9.0	10.0	11.5	12.5	17.0	24.5	28.6	32.0	36.0
25-34 YEARS.....	335	1,646	22.5	9.6	8.5	10.0	12.0	14.0	22.0	30.0	32.6	34.1	40.0
35-44 YEARS.....	334	1,318	25.8	9.2	11.5	13.0	16.0	20.0	25.5	32.0	35.0	36.5	41.0
45-54 YEARS.....	126	1,237	26.8	9.8	12.0	14.0	17.0	20.0	26.0	34.0	37.1	40.0	42.2
55-64 YEARS.....	115	871	28.2	12.9	10.0	11.0	13.0	19.0	28.0	34.0	40.0	45.0	51.5
65-74 YEARS.....	318	652	23.8	9.0	7.5	11.5	15.0	17.5	24.0	30.0	32.2	35.5	40.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 5. NUMBER OF MALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SUBSCAPULAR SKINFOLD, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE									
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH	
<b>ALL RACES<sup>1</sup></b>														
<b>SUBSCAPULAR SKINFOLD IN MILLIMETERS</b>														
1 YEAR.....	286	1,693	6.2	1.9	4.0	4.0	4.0	5.0	6.0	7.0	8.0	8.5	10.0	10.0
2 YEARS.....	298	1,747	5.7	2.0	3.0	4.0	4.0	4.5	5.0	6.5	7.0	8.0	10.0	10.0
3 YEARS.....	308	1,807	5.4	2.0	3.5	4.0	4.0	4.0	5.0	6.0	6.8	7.0	9.5	9.5
4 YEARS.....	304	1,815	5.1	1.7	3.0	3.5	4.0	4.0	5.0	6.0	6.0	7.0	7.0	7.0
5 YEARS.....	273	1,563	5.3	2.7	3.0	3.5	4.0	4.0	5.0	6.0	7.0	7.0	8.0	8.0
6 YEARS.....	179	1,573	5.1	2.4	3.0	3.0	3.5	4.0	4.5	5.0	6.0	7.0	9.0	9.0
7 YEARS.....	164	1,979	5.5	3.0	3.0	3.0	3.5	4.0	4.5	6.0	7.0	9.0	11.0	11.0
8 YEARS.....	152	1,861	5.1	2.3	3.0	3.0	3.5	4.0	4.5	6.0	6.0	7.5	9.0	9.0
9 YEARS.....	169	2,019	7.1	5.1	3.5	3.5	4.0	4.0	5.0	8.0	11.0	14.0	14.0	14.0
10 YEARS.....	184	2,205	6.8	4.5	3.5	4.0	4.0	4.0	5.5	7.0	10.0	12.0	18.0	18.0
11 YEARS.....	178	2,177	8.0	6.2	4.0	4.0	4.0	4.5	6.0	8.5	13.0	15.0	19.0	19.0
12 YEARS.....	200	2,304	8.0	6.9	3.5	4.0	4.5	5.0	6.0	9.0	11.0	14.0	20.5	20.5
13 YEARS.....	174	1,978	8.8	6.0	3.5	4.0	4.5	5.0	6.5	9.0	13.5	17.0	26.0	26.0
14 YEARS.....	174	2,030	8.5	6.1	4.0	4.5	5.0	5.0	6.5	9.0	13.0	16.0	20.0	20.0
15 YEARS.....	171	2,093	9.1	6.5	4.0	5.0	5.0	5.5	7.0	10.0	13.0	15.5	23.0	23.0
16 YEARS.....	169	2,019	9.8	6.2	5.0	5.5	6.0	6.5	8.0	10.5	13.5	16.5	23.5	23.5
17 YEARS.....	176	2,095	9.7	5.9	5.0	5.5	6.0	7.0	8.0	10.0	13.0	16.0	23.0	23.0
<b>WHITE</b>														
1 YEAR.....	211	1,402	6.3	2.0	4.0	4.0	4.0	5.0	6.0	7.0	8.0	8.5	10.0	10.0
2 YEARS.....	217	1,461	5.6	1.9	3.0	3.5	4.0	4.0	5.0	6.0	7.0	7.5	10.0	10.0
3 YEARS.....	226	1,536	5.4	2.0	3.5	4.0	4.0	4.0	5.0	6.0	6.5	7.0	10.0	10.0
4 YEARS.....	229	1,547	5.2	1.8	3.0	4.0	4.0	4.0	5.0	6.0	6.0	7.0	7.0	7.0
5 YEARS.....	207	1,319	5.3	2.7	3.0	3.5	4.0	4.0	5.0	6.0	7.0	7.0	8.0	8.0
6 YEARS.....	126	1,343	5.1	2.4	3.0	3.5	3.5	4.0	4.5	5.5	6.0	7.0	10.0	10.0
7 YEARS.....	125	1,718	5.6	3.1	3.0	3.0	3.5	4.0	5.0	6.0	7.0	8.0	11.5	11.5
8 YEARS.....	116	1,644	5.1	2.3	3.0	3.0	3.0	4.0	4.5	6.0	6.0	7.5	11.0	11.0
9 YEARS.....	117	1,636	7.2	4.7	3.5	4.0	4.0	4.0	5.0	8.5	11.5	14.0	14.0	14.0
10 YEARS.....	148	1,909	6.8	4.5	3.0	4.0	4.0	4.0	5.5	7.0	9.5	12.0	18.0	18.0
11 YEARS.....	132	1,823	8.2	6.4	3.5	4.0	4.0	4.5	6.0	9.0	14.0	15.0	20.0	20.0
12 YEARS.....	152	1,970	8.1	5.8	3.5	4.0	4.0	5.0	6.0	9.0	11.5	14.0	21.0	21.0
13 YEARS.....	129	1,697	9.0	7.1	3.5	4.0	4.0	5.0	6.5	9.0	14.0	17.0	27.0	27.0
14 YEARS.....	134	1,730	9.0	6.5	4.0	5.0	5.0	5.5	6.5	9.0	14.0	16.0	20.0	20.0
15 YEARS.....	124	1,728	8.8	6.4	4.0	5.0	5.0	5.5	7.0	9.0	13.0	15.0	22.0	22.0
16 YEARS.....	128	1,752	9.9	6.4	5.0	5.0	6.0	6.5	8.0	11.0	13.5	17.0	23.5	23.5
17 YEARS.....	139	1,831	9.7	6.1	5.0	5.5	6.0	6.5	8.0	10.0	13.0	16.0	23.0	23.0
<b>BLACK</b>														
1 YEAR.....	72	280	6.0	1.6	4.0	4.0	4.0	5.0	6.0	7.0	7.5	8.0	9.0	9.0
2 YEARS.....	77	267	6.5	2.4	4.0	4.0	4.0	5.0	5.5	7.0	10.0	11.5	11.5	11.5
3 YEARS.....	72	212	5.3	1.6	3.5	4.0	4.0	4.0	5.0	6.0	6.5	6.5	9.0	9.0
4 YEARS.....	74	260	4.8	1.2	3.0	3.0	3.5	4.0	5.0	5.1	6.0	6.0	8.0	8.0
5 YEARS.....	64	226	5.1	2.5	3.0	3.0	3.0	4.0	4.5	5.0	7.0	7.0	8.5	8.5
6 YEARS.....	52	321	4.9	2.1	3.0	3.0	3.5	4.0	5.0	5.0	5.5	7.0	7.0	7.0
7 YEARS.....	38	253	5.2	2.4	3.0	3.0	3.0	3.5	4.0	6.0	8.0	10.0	11.0	11.0
8 YEARS.....	33	203	5.5	2.1	3.5	3.5	4.0	4.0	5.0	6.0	7.5	9.0	9.0	9.0
9 YEARS.....	52	383	6.6	6.3	3.0	3.0	3.0	4.0	5.0	6.0	8.0	8.0	30.0	30.0
10 YEARS.....	33	251	6.7	3.8	4.0	4.0	4.0	4.5	5.0	7.0	9.0	12.0	18.5	18.5
11 YEARS.....	43	313	6.7	4.9	4.0	4.0	4.0	5.0	5.5	6.5	8.0	8.0	12.5	12.5
12 YEARS.....	47	316	7.4	6.9	4.0	4.0	4.5	4.5	5.0	7.0	7.0	17.0	19.0	19.0
13 YEARS.....	45	281	7.6	5.9	4.0	4.5	4.5	5.0	6.0	7.0	8.0	18.5	26.0	26.0
14 YEARS.....	39	282	6.1	2.1	4.0	4.0	5.0	5.0	6.0	7.0	7.0	7.5	12.0	12.0
15 YEARS.....	43	310	10.6	6.7	4.0	5.0	5.5	7.0	9.0	12.0	12.0	24.0	24.0	24.0
16 YEARS.....	41	267	8.5	4.2	5.5	5.5	6.5	6.5	7.0	9.0	9.5	10.0	16.0	16.0
17 YEARS.....	35	235	9.6	5.2	6.0	6.0	6.0	7.0	8.0	10.0	12.0	16.0	16.0	16.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 6. NUMBER OF FEMALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SUBSCAPULAR SKINFOLD, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE									
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH	
<b>ALL RACES<sup>1</sup></b>														
<b>SUBSCAPULAR SKINFOLD IN MILLIMETERS</b>														
1 YEAR	267	1,620	6.2	1.9	4.0	4.0	4.0	5.0	6.0	8.0	8.0	9.0	9.0	
2 YEARS	272	1,708	6.2	2.4	4.0	4.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	
3 YEARS	292	1,701	5.8	2.0	4.0	4.0	4.0	4.5	5.5	6.5	7.0	8.0	9.0	
4 YEARS	281	1,999	5.6	1.9	3.5	4.0	4.0	4.5	5.0	6.0	7.0	8.0	9.0	
5 YEARS	314	1,695	6.2	3.3	3.5	4.0	4.0	4.0	5.0	6.5	8.0	9.0	15.0	
6 YEARS	176	1,787	6.0	2.8	3.0	4.0	4.0	4.5	5.5	6.5	7.0	8.0	10.0	
7 YEARS	169	1,754	6.2	3.3	3.0	4.0	4.0	4.5	5.0	7.0	9.0	10.5	11.5	
8 YEARS	152	1,800	7.7	5.5	3.5	4.0	4.0	4.5	5.5	8.0	12.5	14.5	19.5	
9 YEARS	171	2,017	8.5	5.0	4.0	4.0	4.5	5.0	7.0	10.0	13.0	17.0	19.0	
10 YEARS	197	2,173	8.6	5.1	4.0	4.5	5.0	5.5	6.5	10.0	13.0	18.0	20.0	
11 YEARS	166	1,911	10.1	6.4	4.0	5.0	5.0	6.0	8.0	13.0	16.0	19.0	25.5	
12 YEARS	177	1,812	11.1	6.8	5.0	5.0	5.5	6.0	9.5	13.0	16.0	20.0	25.0	
13 YEARS	198	2,175	11.9	7.1	5.0	6.0	6.0	7.0	9.5	15.0	19.0	23.4	26.0	
14 YEARS	184	2,036	13.0	8.0	5.0	6.0	6.5	8.0	10.0	16.0	19.0	24.0	28.0	
15 YEARS	171	2,163	12.2	7.2	6.0	6.5	7.0	7.5	10.0	14.0	18.0	20.0	27.0	
16 YEARS	175	2,145	13.4	7.8	6.0	7.0	7.5	8.0	10.5	15.0	21.0	25.5	29.0	
17 YEARS	157	1,804	15.6	9.4	6.5	7.0	7.5	9.0	12.5	20.0	25.5	27.0	34.1	
<b>WHITE</b>														
1 YEAR	189	1,328	6.3	1.9	3.5	4.0	4.0	5.0	6.0	8.0	8.0	9.0	9.5	
2 YEARS	203	1,434	6.0	2.1	4.0	4.0	4.0	5.0	6.0	7.0	8.0	8.5	10.0	
3 YEARS	211	1,438	5.8	1.9	4.0	4.0	4.0	5.0	5.5	6.5	7.0	8.0	9.0	
4 YEARS	204	1,339	5.7	1.9	3.5	4.0	4.0	4.5	5.0	6.0	7.0	8.0	9.0	
5 YEARS	224	1,416	6.2	3.2	3.5	4.0	4.0	4.5	5.5	6.5	8.0	10.0	15.0	
6 YEARS	125	1,445	6.0	2.7	3.0	3.5	4.0	4.5	6.0	6.5	7.0	8.0	10.0	
7 YEARS	122	1,507	6.2	3.4	3.0	3.5	4.0	4.5	5.0	7.0	8.5	10.0	12.5	
8 YEARS	117	1,507	7.6	5.6	3.5	4.0	4.0	4.5	6.0	8.0	10.0	13.0	21.0	
9 YEARS	129	1,751	8.5	4.7	4.0	4.5	5.0	5.0	7.0	10.0	13.0	16.0	18.0	
10 YEARS	148	1,855	8.8	5.1	4.0	4.5	5.0	5.5	7.0	10.0	13.0	18.0	20.0	
11 YEARS	122	1,569	10.3	6.7	4.0	5.0	5.0	6.0	8.0	13.0	16.5	20.5	25.5	
12 YEARS	128	1,506	11.1	6.4	5.0	5.0	6.0	6.5	9.5	13.5	17.0	20.0	22.0	
13 YEARS	153	1,886	11.6	6.9	5.0	5.5	6.0	7.0	9.0	15.0	19.0	21.0	25.5	
14 YEARS	132	1,731	13.2	8.2	5.0	6.0	6.5	8.0	10.5	16.0	20.0	24.0	30.0	
15 YEARS	125	1,752	12.4	6.9	6.0	7.0	7.0	8.0	10.0	14.5	18.0	20.0	27.0	
16 YEARS	141	1,933	12.9	7.3	6.0	7.0	7.5	8.0	10.0	15.0	20.5	25.0	28.5	
17 YEARS	117	1,549	15.2	9.3	6.0	7.0	7.5	8.0	12.5	18.0	25.0	26.5	34.0	
<b>BLACK</b>														
1 YEAR	73	257	6.1	2.0	4.0	4.0	4.0	5.0	5.5	8.0	8.5	9.0	9.0	
2 YEARS	66	261	6.8	3.3	4.0	4.0	4.5	5.0	6.0	7.5	9.5	12.0	15.5	
3 YEARS	78	245	5.5	2.0	4.0	4.0	4.0	4.5	5.0	6.0	7.0	7.0	8.0	
4 YEARS	73	246	5.2	1.7	3.0	3.5	4.0	4.0	5.0	6.0	6.0	8.0	8.5	
5 YEARS	88	265	5.8	3.5	4.0	4.0	4.0	4.0	5.0	6.0	6.5	7.0	13.0	
6 YEARS	50	336	6.0	3.3	3.0	4.0	4.0	4.5	5.0	7.0	7.5	7.5	10.0	
7 YEARS	46	241	6.4	2.6	3.0	4.0	4.0	5.0	5.5	8.0	11.0	11.0	11.0	
8 YEARS	35	293	8.2	5.2	4.0	4.0	4.0	4.5	5.0	14.0	15.0	16.0	17.5	
9 YEARS	41	247	8.3	6.4	4.0	4.0	4.0	4.5	5.5	7.5	14.5	24.0	24.0	
10 YEARS	48	303	8.1	5.5	4.0	4.0	4.5	5.0	6.0	8.0	12.5	14.3	22.0	
11 YEARS	42	315	9.2	4.5	4.0	5.0	5.0	5.5	8.0	11.0	14.5	14.5	15.5	
12 YEARS	47	284	10.7	8.6	4.5	5.0	5.0	5.5	7.0	11.5	16.0	28.0	31.0	
13 YEARS	44	287	13.9	8.1	6.0	6.0	6.5	8.0	12.0	15.0	26.0	26.0	28.4	
14 YEARS	50	265	12.5	7.3	6.0	6.0	6.5	7.0	10.0	16.5	23.0	23.0	25.0	
15 YEARS	46	411	11.2	8.4	5.5	5.5	6.0	6.5	7.5	10.5	19.0	20.0	33.4	
16 YEARS	33	203	17.8	10.7	6.0	7.0	8.0	10.5	15.0	24.5	31.0	38.0	38.0	
17 YEARS	39	239	16.4	8.4	7.0	7.5	8.0	9.0	12.5	23.5	27.0	28.0	30.0	

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 7. NUMBER OF MALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SUBSCAPULAR SKINFOLD, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>SUBSCAPULAR SKINFOLD IN MILLIMETERS</b>													
<b>ALL RACES<sup>1</sup></b>													
18-74 YEARS...	5,261	61,180	15.9	7.7	6.0	7.0	8.0	10.0	14.5	20.0	24.0	26.0	30.5
18-19 YEARS.....	260	3,673	12.3	7.1	6.0	6.5	7.0	8.0	10.0	13.0	18.0	23.5	28.5
20-24 YEARS.....	513	8,110	13.7	7.4	6.0	7.0	7.0	8.0	12.0	17.0	20.5	24.0	30.0
25-34 YEARS.....	804	13,003	15.9	8.1	6.5	7.0	8.0	10.0	14.0	20.0	24.5	26.0	30.5
35-44 YEARS.....	664	10,676	16.8	7.2	7.0	8.0	10.0	11.5	16.0	21.0	24.0	26.0	30.5
45-54 YEARS.....	765	11,150	17.5	7.9	7.0	8.0	9.0	12.0	16.5	22.0	25.0	29.0	32.0
55-64 YEARS.....	598	9,073	16.5	7.5	6.0	7.0	8.5	11.0	15.5	21.0	24.5	27.0	30.0
65-74 YEARS.....	1,657	5,496	15.9	7.2	6.0	7.5	9.0	10.5	15.0	20.0	23.0	25.0	30.0
<b>WHITE<sup>2</sup></b>													
18-74 YEARS.....	4,344	54,694	15.9	7.5	6.5	7.5	8.0	10.0	14.5	20.0	24.0	26.0	30.0
18-19 YEARS.....	203	3,206	12.5	7.1	6.0	6.5	7.0	8.0	10.0	13.5	18.0	23.5	28.5
20-24 YEARS.....	423	7,094	13.8	7.3	6.0	7.0	7.0	8.0	12.0	17.0	21.0	24.0	30.0
25-34 YEARS.....	672	11,594	15.8	7.6	7.0	7.5	8.0	10.0	14.0	20.0	25.0	26.0	30.0
35-44 YEARS.....	569	9,516	16.6	7.0	7.0	8.5	10.0	11.5	16.0	20.0	24.0	26.0	30.0
45-54 YEARS.....	628	10,039	17.6	7.6	7.0	8.0	10.0	12.0	16.5	22.0	25.0	28.5	31.0
55-64 YEARS.....	505	8,275	16.5	7.2	6.0	7.0	8.5	11.0	15.5	21.0	24.0	26.5	30.0
65-74 YEARS.....	1,344	4,970	15.9	7.0	6.5	8.0	9.0	11.0	15.0	20.0	23.0	25.0	30.0
<b>BLACK</b>													
18-74 YEARS.....	847	5,753	16.1	9.9	6.0	6.5	7.0	8.5	14.0	21.9	25.0	28.0	35.0
18-19 YEARS.....	52	404	10.9	7.2	4.0	5.5	6.0	7.0	9.0	11.1	15.0	23.5	32.0
20-24 YEARS.....	80	866	13.6	8.6	5.5	6.0	7.0	8.0	11.0	17.0	19.0	26.0	30.0
25-34 YEARS.....	119	1,232	16.6	11.8	6.0	6.5	7.0	8.0	14.0	21.5	25.0	30.5	42.0
35-44 YEARS.....	87	1,005	18.9	8.4	7.0	7.0	8.0	12.0	19.0	24.0	25.5	31.0	33.1
45-54 YEARS.....	130	1,057	16.6	9.7	6.0	7.0	7.0	9.0	13.0	22.0	26.0	32.0	35.0
55-64 YEARS.....	85	703	17.0	10.5	5.0	5.0	6.5	10.0	14.5	23.0	25.0	28.0	35.0
65-74 YEARS.....	294	486	15.2	8.6	6.0	6.0	7.0	8.0	13.0	20.0	23.0	26.0	33.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 8. NUMBER OF FEMALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SUBSCAPULAR SKINFOLD, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>SUBSCAPULAR SKINFOLD IN MILLIMETERS</b>													
<b>ALL RACES<sup>1</sup></b>													
18-74 YEARS...	8,410	67,837	18.8	10.2	6.5	7.5	8.5	10.5	16.0	25.2	30.0	33.2	38.0
18-19 YEARS.....	280	3,679	14.4	7.7	6.5	7.0	7.0	9.0	12.0	15.0	22.0	26.0	30.0
20-24 YEARS.....	1,243	9,215	15.4	8.6	6.0	7.0	8.0	9.0	13.0	15.5	23.0	27.0	32.1
25-34 YEARS.....	1,896	13,933	17.4	10.1	6.0	7.0	8.0	10.0	14.5	22.5	29.0	32.1	38.0
35-44 YEARS.....	1,664	11,593	19.6	10.8	6.5	8.0	9.0	11.0	17.0	26.5	32.0	34.1	39.1
45-54 YEARS.....	836	12,163	21.2	10.5	7.0	8.5	10.0	12.0	20.0	28.0	32.5	35.0	40.0
55-64 YEARS.....	669	9,976	20.9	10.3	7.0	8.0	9.5	12.5	20.0	28.0	32.0	34.5	38.0
65-74 YEARS.....	1,822	7,277	19.5	9.3	7.0	8.0	10.0	12.0	18.0	25.0	30.0	32.5	37.0
<b>WHITE</b>													
18-74 YEARS.....	6,757	59,923	18.2	9.8	6.5	7.5	8.0	10.0	16.0	25.0	29.4	32.0	36.5
18-19 YEARS.....	208	3,155	14.2	7.4	6.5	7.0	7.0	8.5	12.0	19.0	22.0	26.0	30.0
20-24 YEARS.....	956	7,972	15.1	8.5	6.0	7.0	7.5	9.0	13.0	19.0	23.0	27.0	32.0
25-34 YEARS.....	1,539	12,161	16.8	9.8	6.0	7.0	8.0	9.5	14.0	21.5	27.5	32.0	37.0
35-44 YEARS.....	1,302	10,111	18.8	10.5	6.5	7.5	8.5	10.5	16.0	25.0	30.0	34.0	38.0
45-54 YEARS.....	705	10,879	20.4	10.0	7.0	8.5	10.0	12.0	19.0	27.0	31.5	34.0	38.0
55-64 YEARS.....	551	9,037	20.2	9.8	6.5	8.0	9.0	12.0	19.0	27.0	31.0	34.0	37.0
65-74 YEARS.....	1,496	6,603	19.2	9.1	7.0	8.0	10.0	12.0	18.0	25.0	29.0	32.0	36.0
<b>BLACK</b>													
18-74 YEARS.....	1,557	7,302	23.4	12.0	7.0	9.0	10.0	13.0	22.0	31.5	36.1	39.0	44.1
18-19 YEARS.....	70	504	14.9	9.4	6.5	7.0	7.5	9.0	12.0	19.0	20.0	26.0	38.0
20-24 YEARS.....	259	1,073	17.6	9.3	7.0	8.0	9.0	11.0	15.0	22.5	28.0	30.5	35.1
25-34 YEARS.....	335	1,646	21.7	11.3	6.5	8.0	10.0	12.0	20.0	30.0	33.1	36.0	41.0
35-44 YEARS.....	334	1,318	26.0	11.0	9.0	10.0	12.0	17.0	26.5	34.0	38.0	40.1	42.4
45-54 YEARS.....	126	1,237	28.5	12.0	10.5	11.5	14.0	17.5	30.0	37.1	40.0	43.1	46.0
55-64 YEARS.....	115	871	27.5	13.4	7.5	9.5	12.0	19.0	27.0	35.5	40.0	47.0	55.0
65-74 YEARS.....	318	652	22.8	10.5	6.0	8.0	10.0	14.0	24.0	31.0	34.0	35.5	39.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 9. NUMBER OF MALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR UPPER ARM GIRTH, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>ALL RACES<sup>1</sup></b>					UPPER ARM GIRTH IN CENTIMETERS								
1 YEAR.....	286	1,693	16.0	1.3	14.1	14.5	14.7	15.0	15.8	17.0	17.4	17.7	18.6
2 YEARS.....	298	1,747	16.3	1.7	14.1	14.6	15.2	15.4	16.1	17.1	17.5	17.8	18.8
3 YEARS.....	308	1,807	16.8	1.5	14.9	15.2	15.4	15.9	16.5	17.5	18.0	18.2	19.0
4 YEARS.....	304	1,815	17.1	1.4	14.7	15.4	15.5	16.2	17.1	18.0	18.4	18.6	19.2
5 YEARS.....	273	1,563	17.9	2.0	15.6	16.0	16.3	16.7	17.7	18.7	19.2	19.6	20.9
6 YEARS.....	179	1,673	18.0	1.9	15.8	16.1	16.4	16.7	17.7	18.6	19.5	20.0	21.2
7 YEARS.....	164	1,979	18.9	2.1	16.1	16.7	17.2	17.6	18.5	19.6	21.0	22.2	22.9
8 YEARS.....	192	1,861	19.0	1.9	16.1	17.0	17.2	17.6	18.8	20.0	20.6	21.2	22.6
9 YEARS.....	169	2,019	20.7	3.0	16.9	17.5	18.0	18.7	20.0	22.2	24.5	25.2	26.0
10 YEARS.....	184	2,205	21.6	2.9	18.2	18.5	18.8	19.5	21.0	23.2	24.6	25.5	27.4
11 YEARS.....	178	2,177	22.3	3.3	18.6	19.1	19.6	20.1	21.6	23.7	25.2	26.1	28.3
12 YEARS.....	200	2,304	23.6	3.1	19.4	20.3	20.8	21.8	23.0	25.1	26.0	27.8	29.6
13 YEARS.....	174	1,978	24.7	3.0	20.0	21.2	22.1	22.7	24.4	26.2	27.8	28.6	30.1
14 YEARS.....	174	2,030	25.9	3.4	22.0	22.5	22.9	23.4	25.3	27.7	29.1	30.3	32.1
15 YEARS.....	171	2,093	26.7	3.3	22.3	23.0	23.7	24.4	26.2	28.5	29.8	31.4	32.7
16 YEARS.....	169	2,019	28.3	3.1	24.4	24.7	25.3	26.0	28.1	30.1	31.4	32.3	34.3
17 YEARS.....	176	2,095	28.9	3.3	24.6	25.1	25.7	26.6	28.3	30.8	32.6	33.7	34.7
<b>WHITE</b>													
1 YEAR.....	211	1,402	16.1	1.3	14.2	14.7	14.8	15.0	16.0	17.0	17.4	17.7	18.6
2 YEARS.....	217	1,461	16.3	1.7	14.1	14.5	15.1	15.3	16.1	17.0	17.5	17.8	18.5
3 YEARS.....	226	1,536	16.8	1.6	15.0	15.2	15.4	15.9	16.5	17.5	18.0	18.3	18.8
4 YEARS.....	229	1,547	17.1	1.3	14.9	15.4	15.7	16.2	17.1	18.0	18.4	18.6	19.2
5 YEARS.....	207	1,319	18.0	2.1	15.5	16.1	16.4	16.8	17.7	18.8	19.2	19.6	20.9
6 YEARS.....	126	1,343	18.0	2.0	15.6	16.0	16.3	16.7	17.7	18.8	19.5	20.3	22.0
7 YEARS.....	125	1,718	18.9	2.0	16.2	16.8	17.3	17.7	18.5	19.6	21.0	22.2	22.9
8 YEARS.....	116	1,644	19.0	1.9	16.1	17.0	17.2	17.6	18.8	20.0	20.6	21.5	22.6
9 YEARS.....	117	1,636	20.9	3.1	17.2	17.7	18.0	18.7	20.1	22.4	24.9	25.3	26.6
10 YEARS.....	148	1,909	21.7	2.9	18.2	18.4	18.9	19.5	21.0	23.3	24.7	25.5	27.0
11 YEARS.....	132	1,823	22.3	3.3	18.6	19.0	19.4	20.1	21.8	23.9	25.2	26.0	28.3
12 YEARS.....	152	1,970	23.7	2.9	19.5	20.4	21.0	21.8	23.2	25.2	26.2	28.0	29.6
13 YEARS.....	129	1,697	24.7	2.9	20.0	21.1	22.1	22.8	24.4	26.2	27.3	28.5	30.5
14 YEARS.....	134	1,730	26.1	3.5	22.0	22.8	23.2	23.6	25.3	28.3	29.2	30.6	32.2
15 YEARS.....	124	1,728	26.5	3.2	22.2	23.0	23.3	24.2	25.8	28.4	29.6	31.3	31.9
16 YEARS.....	128	1,752	28.4	3.3	23.7	24.6	24.8	26.1	28.0	30.9	31.6	32.4	34.3
17 YEARS.....	139	1,831	28.9	3.4	24.7	25.1	25.7	26.6	28.1	30.8	32.8	33.7	34.7
<b>BLACK</b>													
1 YEAR.....	72	280	15.5	1.2	13.8	14.0	14.2	14.9	15.5	16.0	17.1	17.5	17.8
2 YEARS.....	77	267	16.6	1.6	14.7	15.0	15.3	15.6	16.2	17.2	17.7	20.3	20.3
3 YEARS.....	72	212	16.7	1.5	15.0	15.1	15.3	15.8	16.4	17.5	17.9	18.2	19.1
4 YEARS.....	74	260	16.6	1.6	14.1	14.6	15.4	15.4	16.3	17.8	18.5	18.6	20.0
5 YEARS.....	64	226	17.6	1.8	15.6	15.6	16.0	16.5	17.2	18.4	18.7	19.1	20.8
6 YEARS.....	52	321	17.9	1.5	16.2	16.5	16.5	16.8	18.0	18.3	19.0	19.4	20.0
7 YEARS.....	38	253	18.6	2.7	14.2	15.5	16.1	16.8	18.4	20.0	20.6	21.8	22.6
8 YEARS.....	33	203	19.4	1.5	17.3	17.6	17.6	18.5	19.4	20.1	21.2	21.2	21.8
9 YEARS.....	52	383	20.0	2.3	16.8	16.8	17.1	18.9	19.8	21.2	22.0	22.2	25.0
10 YEARS.....	33	251	21.0	3.0	18.2	18.5	18.5	19.1	20.6	21.7	22.0	23.6	27.3
11 YEARS.....	43	313	22.5	3.3	19.4	20.1	20.5	20.8	21.5	22.1	24.3	28.2	30.5
12 YEARS.....	47	316	23.0	3.8	18.6	19.7	20.1	20.9	22.5	23.3	24.9	26.2	29.0
13 YEARS.....	45	281	24.8	3.4	20.9	21.7	21.7	22.1	23.8	27.8	28.6	29.9	29.9
14 YEARS.....	39	282	24.8	2.5	22.1	22.1	22.1	22.9	25.4	25.9	27.5	27.5	28.2
15 YEARS.....	43	310	27.3	2.9	23.9	24.0	24.9	25.2	26.4	28.7	30.6	31.5	33.2
16 YEARS.....	41	267	28.2	2.2	25.7	25.7	25.8	25.9	28.5	28.8	30.3	30.6	31.5
17 YEARS.....	35	235	28.8	3.1	23.7	24.7	25.9	26.4	28.4	31.0	31.0	32.0	34.9

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 10. NUMBER OF FEMALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR UPPER ARM GIRTH, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE									
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH	
<b>UPPER ARM GIRTH IN CENTIMETERS</b>														
<b>ALL RACES<sup>1</sup></b>														
1 YEAR.....	267	1,620	15.6	1.2	13.7	14.2	14.3	14.8	15.6	16.3	16.7	17.0	17.7	
2 YEARS.....	272	1,708	16.1	1.3	14.2	14.5	14.8	15.2	16.0	16.7	17.2	17.5	18.5	
3 YEARS.....	292	1,701	16.6	1.3	14.3	15.0	15.2	15.7	16.7	17.4	17.9	18.1	18.8	
4 YEARS.....	281	1,599	16.8	1.4	14.8	15.2	15.6	16.0	16.7	17.6	18.2	18.5	19.1	
5 YEARS.....	314	1,695	17.6	2.0	15.2	15.6	15.8	16.4	17.3	18.2	18.8	19.7	21.5	
6 YEARS.....	176	1,787	18.0	1.9	15.7	16.2	16.4	17.0	17.6	18.8	19.3	20.2	21.1	
7 YEARS.....	169	1,754	18.7	2.1	15.2	16.7	16.8	17.5	18.3	19.8	20.5	20.9	22.1	
8 YEARS.....	152	1,800	20.0	2.6	16.8	17.4	17.8	18.2	19.4	21.4	22.5	23.6	25.5	
9 YEARS.....	171	2,017	21.0	2.5	17.6	17.9	18.3	19.0	20.9	22.3	23.5	24.8	25.7	
10 YEARS.....	197	2,173	21.1	2.4	17.6	18.3	18.7	19.4	20.8	22.5	23.6	24.3	25.4	
11 YEARS.....	166	1,911	22.9	3.3	18.3	19.3	19.7	20.5	22.2	24.7	26.2	27.0	29.7	
12 YEARS.....	177	1,812	23.7	3.3	19.1	19.8	20.3	21.3	23.6	25.4	26.7	28.1	29.2	
13 YEARS.....	198	2,175	25.1	3.8	20.1	21.3	21.6	22.4	24.2	26.7	29.0	30.3	33.1	
14 YEARS.....	184	2,036	25.9	3.7	21.2	21.8	22.7	23.4	25.0	27.7	29.8	30.9	32.8	
15 YEARS.....	171	2,163	25.9	3.6	21.4	22.0	22.5	23.5	25.2	27.9	29.0	29.2	32.2	
16 YEARS.....	175	2,145	26.3	3.7	21.9	22.4	23.0	23.6	25.6	28.3	29.3	31.8	33.1	
17 YEARS.....	157	1,804	27.2	4.3	22.1	22.7	23.3	24.1	26.2	29.6	30.8	32.6	35.0	
<b>WHITE</b>														
1 YEAR.....	189	1,328	15.6	1.2	13.8	14.3	14.4	14.8	15.6	16.4	16.8	17.1	17.6	
2 YEARS.....	203	1,434	16.0	1.2	14.2	14.5	14.8	15.2	16.0	16.7	17.2	17.3	18.2	
3 YEARS.....	211	1,438	16.6	1.3	14.3	15.0	15.2	15.8	16.7	17.5	17.9	18.1	18.7	
4 YEARS.....	204	1,339	16.8	1.4	14.8	15.3	15.7	16.0	16.7	17.6	18.2	18.4	19.1	
5 YEARS.....	224	1,416	17.7	2.0	15.3	15.7	15.8	16.5	17.4	18.4	19.0	20.3	21.5	
6 YEARS.....	125	1,445	18.0	1.8	15.7	16.2	16.4	16.9	17.7	18.7	19.1	20.1	21.1	
7 YEARS.....	122	1,507	18.6	2.2	15.2	16.7	16.8	17.5	18.2	19.5	20.5	20.9	22.6	
8 YEARS.....	117	1,507	20.1	2.6	16.9	17.3	17.8	18.2	19.4	21.3	22.4	24.4	25.6	
9 YEARS.....	129	1,751	21.1	2.5	17.8	18.2	18.4	19.3	21.1	22.4	23.5	24.8	25.9	
10 YEARS.....	148	1,855	21.0	2.4	17.4	18.4	18.8	19.4	20.9	22.5	23.2	24.3	25.2	
11 YEARS.....	122	1,569	23.0	3.3	18.5	19.4	20.0	20.5	22.4	24.4	26.2	27.0	30.0	
12 YEARS.....	128	1,506	23.9	3.0	19.7	20.4	21.0	21.6	23.7	25.6	26.8	28.1	29.2	
13 YEARS.....	153	1,886	25.2	3.8	20.2	21.3	21.7	22.4	24.2	26.9	29.2	30.3	33.1	
14 YEARS.....	132	1,731	26.1	3.7	21.1	22.3	22.9	23.5	25.3	27.7	29.9	31.1	33.0	
15 YEARS.....	125	1,752	26.3	3.4	21.7	22.8	23.3	24.4	25.7	28.2	29.1	29.2	32.1	
16 YEARS.....	141	1,933	26.1	3.4	21.6	22.4	23.0	23.6	25.5	28.3	29.1	31.4	32.4	
17 YEARS.....	117	1,549	27.1	4.2	22.1	22.7	23.2	24.1	26.2	29.6	30.4	32.4	34.7	
<b>BLACK</b>														
1 YEAR.....	73	257	15.3	1.5	13.5	13.6	14.0	14.2	15.2	16.1	16.3	17.0	18.9	
2 YEARS.....	66	261	16.2	1.6	13.5	14.5	14.8	14.9	15.9	17.5	18.3	18.7	19.2	
3 YEARS.....	78	245	16.3	1.2	14.8	15.0	15.3	15.5	16.0	16.8	17.1	17.6	18.9	
4 YEARS.....	73	246	16.8	1.5	14.0	14.5	15.3	16.0	16.7	17.7	18.6	18.9	19.0	
5 YEARS.....	88	265	17.3	1.9	13.9	15.3	16.0	16.3	17.0	18.0	18.5	18.5	22.1	
6 YEARS.....	50	336	18.2	2.4	15.9	16.0	16.1	17.2	17.6	19.0	19.5	20.5	22.0	
7 YEARS.....	46	241	18.8	1.6	16.5	16.7	16.7	17.0	19.1	20.2	20.2	20.3	22.0	
8 YEARS.....	35	293	19.4	2.3	16.4	17.4	17.4	17.7	19.0	21.5	22.5	23.0	23.6	
9 YEARS.....	41	247	20.0	2.7	16.6	16.6	17.4	17.8	19.3	21.3	23.7	23.7	25.1	
10 YEARS.....	48	303	21.4	2.9	17.6	18.3	18.7	19.7	20.5	23.3	25.3	25.5	26.1	
11 YEARS.....	42	315	22.5	3.3	18.0	18.0	19.6	20.0	22.0	24.7	26.2	26.6	29.7	
12 YEARS.....	47	284	22.8	4.2	18.5	18.5	19.1	19.4	21.0	25.3	26.0	27.9	31.1	
13 YEARS.....	44	287	24.6	3.5	19.2	20.5	21.5	21.8	24.2	26.4	27.6	30.7	31.3	
14 YEARS.....	50	265	25.3	4.0	21.2	21.4	21.8	22.3	24.5	28.6	29.5	29.5	32.8	
15 YEARS.....	46	411	24.1	3.8	19.7	21.4	21.7	22.0	22.6	25.7	26.7	28.1	35.2	
16 YEARS.....	33	203	28.1	5.2	23.1	23.1	23.2	24.3	26.0	30.1	34.4	38.2	38.2	
17 YEARS.....	39	239	26.8	4.0	21.8	23.4	23.6	24.1	25.6	27.5	30.1	32.8	38.3	

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 11. NUMBER OF MALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR UPPER ARM GIRTH, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
UPPER ARM GIRTH IN CENTIMETERS													
ALL RACES <sup>1</sup>													
18-74 YEARS...	5,261	61,180	31.8	3.4	26.4	27.6	28.5	29.6	31.7	33.9	35.1	36.0	37.3
18-19 YEARS.....	260	3,673	30.5	3.6	25.3	26.6	27.4	28.1	30.1	32.2	33.7	35.3	37.9
20-24 YEARS.....	513	8,110	31.1	3.4	26.4	27.2	27.7	29.0	31.0	33.1	34.3	35.5	37.4
25-34 YEARS.....	804	13,003	32.3	3.5	27.0	28.2	28.9	30.0	32.0	34.4	35.6	36.6	37.6
35-44 YEARS.....	664	10,676	32.7	3.1	27.8	28.7	29.6	30.7	32.7	34.8	35.8	36.3	37.1
45-54 YEARS.....	765	11,150	32.1	3.3	26.7	27.8	28.9	30.0	32.1	34.2	35.4	36.2	37.6
55-64 YEARS.....	598	9,073	31.5	3.3	25.6	27.3	28.2	29.6	31.7	33.4	34.5	35.2	36.6
65-74 YEARS.....	1,657	5,496	30.5	3.1	25.3	26.5	27.3	28.5	30.7	32.4	33.6	34.4	35.5
WHITE													
18-74 YEARS.....	4,344	54,694	31.8	3.3	26.5	27.7	28.5	29.6	31.7	33.8	35.1	35.9	37.1
18-19 YEARS.....	203	3,206	30.5	3.6	25.3	26.6	27.5	28.1	30.1	32.5	34.0	35.4	37.9
20-24 YEARS.....	423	7,094	31.2	3.2	26.4	27.2	27.8	29.0	31.0	33.1	34.4	35.6	37.4
25-34 YEARS.....	672	11,594	32.3	3.3	27.3	28.3	28.9	30.0	32.1	34.3	35.4	36.5	37.5
35-44 YEARS.....	569	9,516	32.7	3.0	28.1	28.9	29.6	30.7	32.6	34.6	35.7	36.2	37.1
45-54 YEARS.....	628	10,039	32.1	3.2	26.7	27.9	29.0	30.1	32.2	34.2	35.4	36.2	37.5
55-64 YEARS.....	505	8,275	31.4	3.2	25.6	27.3	28.2	29.7	31.7	33.3	34.5	35.0	36.4
65-74 YEARS.....	1,344	4,970	30.5	3.1	25.2	26.6	27.5	28.6	30.7	32.4	33.5	34.2	35.2
BLACK													
18-74 YEARS.....	847	5,753	32.3	4.4	26.5	27.3	28.1	29.5	31.8	34.7	36.3	37.6	39.3
18-19 YEARS.....	52	404	30.6	3.8	27.0	27.2	27.4	28.5	30.1	31.7	32.8	33.1	42.5
20-24 YEARS.....	80	866	31.6	3.9	27.2	27.8	28.1	29.4	31.3	33.3	34.3	34.6	38.0
25-34 YEARS.....	119	1,232	33.0	5.3	26.6	28.1	29.3	30.5	32.1	35.1	36.6	37.6	38.3
35-44 YEARS.....	87	1,005	33.6	3.6	26.6	28.0	29.0	31.8	34.6	36.2	37.1	37.8	38.7
45-54 YEARS.....	130	1,057	31.8	3.9	26.8	26.8	27.6	29.4	31.5	32.8	35.2	38.8	39.3
55-64 YEARS.....	85	703	32.5	4.6	25.5	27.4	27.5	29.5	32.0	35.0	38.2	38.5	41.0
65-74 YEARS.....	294	486	30.9	3.6	25.8	26.6	27.1	28.2	30.8	33.0	35.2	35.7	37.6

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 12. NUMBER OF FEMALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR UPPER ARM GIRTH, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
UPPER ARM GIRTH IN CENTIMETERS													
ALL RACES <sup>1</sup>													
18-74 YEARS...	8,410	67,837	29.4	4.6	23.2	24.3	25.0	26.2	28.7	31.9	33.8	35.2	37.8
18-19 YEARS.....	280	3,679	26.6	3.7	22.1	23.0	23.2	24.1	26.2	28.2	30.5	31.5	33.2
20-24 YEARS.....	1,243	9,215	27.2	4.0	22.2	23.0	23.6	24.6	26.5	29.0	30.8	31.8	34.5
25-34 YEARS.....	1,896	13,933	28.6	4.3	23.3	24.2	24.8	25.7	27.8	30.4	32.5	34.1	37.2
35-44 YEARS.....	1,664	11,593	30.0	4.7	24.1	25.2	25.8	26.8	29.2	32.2	34.5	36.2	38.5
45-54 YEARS.....	836	12,163	30.7	4.5	24.3	25.7	26.6	27.5	30.3	32.9	34.9	36.8	39.3
55-64 YEARS.....	669	9,976	30.7	4.8	23.9	25.1	26.1	27.7	30.2	33.3	35.0	36.3	38.2
65-74 YEARS.....	1,822	7,277	30.1	4.2	23.8	25.2	26.2	27.4	29.9	32.6	34.2	35.3	37.2
WHITE													
18-74 YEARS.....	6,757	59,923	29.2	4.4	23.2	24.3	25.0	26.2	28.6	31.6	33.4	34.9	37.5
18-19 YEARS.....	208	3,159	26.6	3.6	21.7	23.0	23.3	24.2	26.2	28.2	30.5	31.5	33.0
20-24 YEARS.....	956	7,972	27.1	3.9	22.2	23.0	23.6	24.6	26.5	28.9	30.7	31.7	34.1
25-34 YEARS.....	1,539	12,161	28.4	4.1	23.4	24.2	24.7	25.6	27.6	30.2	32.3	33.8	36.1
35-44 YEARS.....	1,302	10,111	29.7	4.6	24.1	25.0	25.7	26.7	29.0	31.6	34.1	35.7	38.2
45-54 YEARS.....	705	10,879	30.4	4.2	24.3	25.7	26.5	27.4	30.0	32.7	34.4	36.0	38.7
55-64 YEARS.....	551	9,037	30.4	4.4	24.0	25.1	26.1	27.6	30.1	33.0	34.8	35.8	37.8
65-74 YEARS.....	1,496	6,603	30.1	4.1	24.0	25.2	26.3	27.4	29.8	32.5	34.0	35.2	37.1
BLACK													
18-74 YEARS.....	1,557	7,302	30.8	5.8	23.1	24.3	25.2	26.7	30.1	34.2	36.2	37.6	41.0
18-19 YEARS.....	70	504	26.5	4.0	22.2	22.8	23.1	23.5	25.6	28.1	29.2	32.2	37.2
20-24 YEARS.....	259	1,073	27.9	4.5	22.2	23.4	24.2	24.8	26.8	30.0	32.0	34.5	37.6
25-34 YEARS.....	335	1,646	29.9	5.1	23.0	24.0	25.1	26.5	29.0	32.4	34.6	37.3	40.2
35-44 YEARS.....	334	1,318	32.1	5.5	25.0	25.8	27.0	28.3	31.9	35.0	36.2	37.7	41.1
45-54 YEARS.....	126	1,237	33.3	5.9	25.5	27.2	27.7	29.6	32.1	35.9	39.3	41.1	44.7
55-64 YEARS.....	115	871	33.2	7.0	23.5	24.8	27.6	28.4	32.6	36.6	37.1	41.0	44.3
65-74 YEARS.....	318	652	31.0	4.9	22.2	24.2	25.8	27.7	31.5	34.4	35.1	36.4	38.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.



TABLE 13. NUMBER OF MALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR ELBOW BREADTH, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>ALL RACES<sup>1</sup></b>													
<b>ELBOW BREADTH IN CENTIMETERS</b>													
1 YEAR.....	286	1,693	4.0	.3	3.5	3.7	3.7	3.8	4.0	4.2	4.3	4.4	4.5
2 YEARS.....	298	1,747	4.2	.3	3.7	3.9	3.9	4.0	4.2	4.4	4.5	4.6	4.7
3 YEARS.....	308	1,807	4.4	.3	4.0	4.1	4.2	4.3	4.4	4.6	4.7	4.8	5.0
4 YEARS.....	304	1,815	4.6	.3	4.2	4.3	4.3	4.4	4.6	4.9	5.0	5.2	5.2
5 YEARS.....	273	1,563	4.9	.3	4.3	4.4	4.5	4.6	4.9	5.1	5.2	5.3	5.3
6 YEARS.....	179	1,673	5.0	.3	4.4	4.6	4.6	4.7	5.0	5.2	5.3	5.4	5.5
7 YEARS.....	164	1,979	5.1	.4	4.5	4.7	4.8	4.9	5.2	5.3	5.5	5.5	5.7
8 YEARS.....	152	1,861	5.3	.3	4.8	4.9	4.9	5.0	5.3	5.5	5.6	5.7	5.9
9 YEARS.....	169	2,019	5.6	.4	5.0	5.1	5.2	5.3	5.6	5.8	6.0	6.1	6.3
10 YEARS.....	184	2,205	5.7	.4	5.1	5.3	5.3	5.4	5.7	6.0	6.1	6.2	6.4
11 YEARS.....	178	2,177	5.9	.4	5.2	5.4	5.6	5.7	5.9	6.2	6.3	6.4	6.6
12 YEARS.....	200	2,304	6.3	.5	5.5	5.7	5.8	6.0	6.3	6.6	6.7	6.8	7.0
13 YEARS.....	174	1,978	6.5	.5	5.8	6.0	6.2	6.2	6.5	6.8	7.0	7.1	7.2
14 YEARS.....	174	2,030	6.8	.4	6.0	6.3	6.4	6.6	6.8	7.1	7.2	7.3	7.5
15 YEARS.....	171	2,093	6.9	.4	6.1	6.3	6.4	6.6	7.0	7.2	7.3	7.5	7.7
16 YEARS.....	169	2,019	7.1	.4	6.5	6.6	6.6	6.8	7.1	7.3	7.6	7.6	7.8
17 YEARS.....	176	2,095	7.0	.4	6.3	6.6	6.7	6.8	7.1	7.3	7.5	7.6	7.7
<b>WHITE</b>													
1 YEAR.....	211	1,402	4.0	.3	3.6	3.7	3.8	3.8	4.0	4.2	4.3	4.4	4.5
2 YEARS.....	217	1,461	4.2	.3	3.7	3.9	3.9	4.0	4.2	4.4	4.5	4.6	4.7
3 YEARS.....	226	1,536	4.4	.3	4.0	4.1	4.2	4.3	4.4	4.6	4.7	4.8	5.0
4 YEARS.....	229	1,547	4.6	.3	4.2	4.3	4.3	4.4	4.6	4.8	4.9	5.0	5.1
5 YEARS.....	207	1,319	4.9	.3	4.3	4.4	4.5	4.6	4.8	5.1	5.2	5.3	5.3
6 YEARS.....	126	1,343	5.0	.3	4.4	4.5	4.6	4.8	4.9	5.2	5.3	5.4	5.4
7 YEARS.....	125	1,718	5.1	.4	4.6	4.7	4.8	4.9	5.2	5.3	5.5	5.6	5.7
8 YEARS.....	116	1,644	5.3	.3	4.8	4.9	4.9	5.0	5.3	5.5	5.6	5.7	5.8
9 YEARS.....	117	1,636	5.6	.4	5.0	5.0	5.2	5.3	5.6	5.8	6.0	6.2	6.3
10 YEARS.....	148	1,909	5.7	.4	5.1	5.3	5.4	5.4	5.7	5.9	6.1	6.2	6.4
11 YEARS.....	132	1,823	5.9	.4	5.2	5.4	5.6	5.7	5.9	6.2	6.3	6.4	6.6
12 YEARS.....	152	1,970	6.3	.4	5.6	5.7	5.8	6.0	6.3	6.6	6.7	6.8	7.0
13 YEARS.....	129	1,697	6.5	.5	5.8	6.1	6.2	6.2	6.5	6.8	7.0	7.1	7.2
14 YEARS.....	134	1,730	6.8	.4	6.2	6.3	6.4	6.6	6.8	7.1	7.2	7.3	7.4
15 YEARS.....	124	1,728	6.9	.5	6.1	6.2	6.4	6.6	6.9	7.2	7.3	7.5	7.7
16 YEARS.....	128	1,752	7.1	.4	6.5	6.6	6.6	6.8	7.1	7.4	7.6	7.6	7.9
17 YEARS.....	139	1,831	7.0	.4	6.4	6.6	6.7	6.8	7.0	7.3	7.5	7.6	7.7
<b>BLACK</b>													
1 YEAR.....	72	280	4.0	.3	3.4	3.5	3.7	3.8	4.0	4.1	4.3	4.4	4.5
2 YEARS.....	77	267	4.4	.3	3.9	4.0	4.1	4.2	4.4	4.5	4.6	4.8	4.8
3 YEARS.....	72	212	4.4	.3	4.0	4.1	4.2	4.2	4.4	4.5	4.6	4.8	5.1
4 YEARS.....	74	260	4.7	.4	4.2	4.3	4.3	4.4	4.6	5.0	5.2	5.3	5.3
5 YEARS.....	64	226	4.9	.3	4.3	4.4	4.5	4.6	5.0	5.1	5.1	5.3	5.3
6 YEARS.....	52	321	5.0	.3	4.6	4.6	4.6	4.7	5.1	5.2	5.3	5.3	5.8
7 YEARS.....	38	253	5.1	.4	4.3	4.4	4.8	4.9	5.2	5.4	5.5	5.5	5.6
8 YEARS.....	33	203	5.5	.4	4.9	5.0	5.1	5.1	5.5	5.7	5.7	5.9	5.9
9 YEARS.....	52	383	5.6	.4	5.0	5.2	5.2	5.3	5.5	5.7	5.9	6.0	6.5
10 YEARS.....	33	251	5.8	.5	5.2	5.2	5.3	5.4	5.7	6.1	6.1	6.6	6.6
11 YEARS.....	43	313	6.0	.4	5.4	5.4	5.7	5.8	6.0	6.2	6.3	6.4	6.4
12 YEARS.....	47	316	6.4	.6	5.5	5.5	5.8	5.9	6.4	6.8	6.9	7.3	7.4
13 YEARS.....	45	281	6.5	.4	5.9	5.9	6.1	6.2	6.4	6.9	7.1	7.1	7.1
14 YEARS.....	39	282	6.8	.6	5.9	5.9	6.0	6.4	6.7	7.1	7.3	7.7	7.7
15 YEARS.....	43	310	7.0	.4	6.5	6.5	6.6	6.7	7.1	7.2	7.4	7.7	7.7
16 YEARS.....	41	267	7.1	.3	6.6	6.8	6.8	6.8	7.0	7.3	7.4	7.6	7.7
17 YEARS.....	35	235	7.0	.4	6.5	6.7	6.7	6.7	7.1	7.2	7.4	7.6	7.6

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 14. NUMBER OF FEMALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR ELBOW BREADTH, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>ALL RACES<sup>1</sup></b>					<b>ELBOW BREADTH IN CENTIMETERS</b>								
1 YEAR	267	1,620	3.9	.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.3	4.4
2 YEARS	272	1,708	4.0	.3	3.6	3.7	3.7	3.8	4.0	4.2	4.3	4.4	4.5
3 YEARS	292	1,701	4.3	.3	3.8	3.9	4.0	4.1	4.3	4.4	4.5	4.6	4.7
4 YEARS	281	1,599	4.4	.3	4.0	4.1	4.1	4.2	4.4	4.6	4.7	4.7	4.9
5 YEARS	314	1,695	4.6	.3	4.1	4.2	4.3	4.4	4.6	4.8	5.0	5.0	5.2
6 YEARS	176	1,787	4.8	.3	4.2	4.4	4.5	4.6	4.7	5.0	5.1	5.1	5.3
7 YEARS	169	1,754	5.0	.3	4.4	4.5	4.6	4.8	5.0	5.2	5.3	5.4	5.5
8 YEARS	152	1,800	5.1	.3	4.6	4.7	4.8	4.9	5.1	5.3	5.5	5.6	5.7
9 YEARS	171	2,017	5.4	.4	4.8	5.0	5.0	5.1	5.4	5.6	5.7	5.8	6.0
10 YEARS	197	2,173	5.5	.4	4.9	5.0	5.1	5.2	5.5	5.7	5.8	5.9	6.0
11 YEARS	166	1,911	5.7	.4	5.2	5.3	5.3	5.5	5.7	6.0	6.2	6.3	6.4
12 YEARS	177	1,812	5.9	.4	5.3	5.5	5.5	5.6	5.9	6.1	6.3	6.4	6.5
13 YEARS	198	2,175	6.0	.4	5.5	5.6	5.6	5.7	6.0	6.2	6.3	6.4	6.6
14 YEARS	184	2,036	6.0	.4	5.4	5.5	5.6	5.8	6.0	6.3	6.4	6.5	6.5
15 YEARS	171	2,163	6.1	.4	5.4	5.6	5.7	5.8	6.0	6.3	6.4	6.6	6.7
16 YEARS	175	2,145	6.1	.4	5.5	5.6	5.7	5.8	6.0	6.3	6.5	6.6	6.7
17 YEARS	157	1,804	6.1	.4	5.4	5.6	5.7	5.8	6.0	6.3	6.5	6.6	6.7
<b>WHITE</b>													
1 YEAR	189	1,328	3.9	.3	3.4	3.5	3.6	3.7	3.8	4.1	4.2	4.2	4.3
2 YEARS	203	1,434	4.0	.3	3.6	3.7	3.8	3.8	4.0	4.2	4.3	4.4	4.5
3 YEARS	211	1,438	4.3	.3	3.8	3.9	4.0	4.1	4.3	4.4	4.5	4.6	4.6
4 YEARS	204	1,339	4.4	.3	4.0	4.1	4.1	4.2	4.4	4.6	4.7	4.7	4.8
5 YEARS	224	1,416	4.6	.3	4.1	4.2	4.3	4.4	4.6	4.8	5.0	5.0	5.2
6 YEARS	125	1,445	4.8	.3	4.3	4.4	4.5	4.6	4.7	5.0	5.1	5.1	5.2
7 YEARS	122	1,507	5.0	.3	4.4	4.5	4.6	4.7	5.0	5.2	5.3	5.3	5.4
8 YEARS	117	1,507	5.1	.4	4.6	4.6	4.7	4.9	5.1	5.4	5.6	5.7	5.7
9 YEARS	129	1,751	5.4	.4	4.7	5.0	5.0	5.1	5.4	5.6	5.7	5.9	6.0
10 YEARS	148	1,855	5.5	.3	4.9	5.0	5.1	5.2	5.5	5.7	5.8	5.9	6.0
11 YEARS	122	1,569	5.8	.4	5.2	5.3	5.3	5.5	5.8	6.0	6.3	6.3	6.5
12 YEARS	128	1,506	5.9	.4	5.3	5.5	5.5	5.6	5.9	6.1	6.3	6.4	6.5
13 YEARS	153	1,886	6.0	.4	5.5	5.6	5.7	5.8	6.0	6.2	6.3	6.4	6.6
14 YEARS	132	1,731	6.0	.4	5.4	5.5	5.6	5.7	6.0	6.3	6.4	6.5	6.5
15 YEARS	125	1,752	6.1	.4	5.4	5.5	5.6	5.7	6.1	6.3	6.4	6.6	6.7
16 YEARS	141	1,933	6.0	.4	5.5	5.6	5.7	5.8	6.0	6.3	6.4	6.5	6.7
17 YEARS	117	1,549	6.0	.4	5.4	5.5	5.7	5.8	6.0	6.2	6.4	6.6	6.7
<b>BLACK</b>													
1 YEAR	73	257	3.9	.3	3.4	3.5	3.7	3.7	3.9	4.1	4.3	4.4	4.6
2 YEARS	66	261	4.0	.4	3.4	3.6	3.7	3.8	4.1	4.3	4.4	4.6	4.7
3 YEARS	78	245	4.2	.3	3.9	4.0	4.0	4.1	4.2	4.4	4.5	4.6	4.8
4 YEARS	73	246	4.5	.3	4.0	4.0	4.1	4.2	4.5	4.6	4.9	4.9	5.0
5 YEARS	88	265	4.7	.3	4.2	4.3	4.4	4.5	4.7	4.9	5.0	5.0	5.2
6 YEARS	50	336	4.8	.4	4.1	4.2	4.4	4.5	4.7	5.0	5.3	5.4	5.4
7 YEARS	46	241	5.1	.3	4.7	4.8	4.9	5.0	5.0	5.2	5.4	5.5	5.7
8 YEARS	35	293	5.1	.2	4.7	4.8	4.9	5.0	5.2	5.3	5.3	5.4	5.4
9 YEARS	41	247	5.3	.3	4.8	5.0	5.0	5.1	5.3	5.5	5.6	5.6	5.8
10 YEARS	48	303	5.5	.4	4.8	4.8	5.0	5.2	5.5	5.8	5.9	6.1	6.3
11 YEARS	42	315	5.7	.3	5.4	5.4	5.4	5.5	5.7	5.9	5.9	5.9	6.2
12 YEARS	47	284	6.0	.4	5.3	5.5	5.6	5.7	6.0	6.2	6.2	6.4	6.7
13 YEARS	44	287	6.0	.4	5.5	5.5	5.6	5.6	6.0	6.3	6.4	6.6	6.6
14 YEARS	50	265	6.1	.3	5.5	5.8	5.9	5.9	6.1	6.2	6.4	6.6	6.6
15 YEARS	46	411	6.1	.3	5.7	5.9	5.9	6.0	6.0	6.2	6.4	6.6	6.6
16 YEARS	33	203	6.2	.5	5.6	5.7	5.8	6.0	6.1	6.6	6.9	6.9	7.0
17 YEARS	39	239	6.2	.4	5.7	5.8	5.8	6.0	6.2	6.4	6.6	6.8	6.8

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 15. NUMBER OF MALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR ELBOW BREADTH, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>ELBOW BREADTH IN CENTIMETERS</b>													
<u>ALL RACES</u> <sup>1</sup>													
18-74 YEARS....	5,261	61,180	7.2	.4	6.5	6.7	6.8	6.9	7.2	7.5	7.7	7.7	7.9
18-19 YEARS.....	260	3,673	7.1	.4	6.4	6.6	6.7	6.8	7.1	7.3	7.5	7.6	7.6
20-24 YEARS.....	513	8,110	7.1	.4	6.3	6.5	6.7	6.8	7.1	7.4	7.5	7.6	7.8
25-34 YEARS.....	804	13,003	7.2	.4	6.4	6.6	6.8	6.9	7.2	7.4	7.6	7.7	7.9
35-44 YEARS.....	664	10,676	7.2	.4	6.6	6.7	6.8	7.0	7.2	7.5	7.6	7.7	8.0
45-54 YEARS.....	765	11,150	7.3	.4	6.6	6.8	6.9	7.0	7.3	7.5	7.7	7.8	7.9
55-64 YEARS.....	598	9,073	7.3	.4	6.7	6.8	6.9	7.0	7.3	7.6	7.7	7.8	8.0
65-74 YEARS.....	1,657	5,496	7.3	.4	6.6	6.8	6.9	7.0	7.3	7.6	7.7	7.8	8.0
<u>WHITE</u>													
18-74 YEARS.....	4,344	54,694	7.2	.4	6.5	6.7	6.8	7.0	7.2	7.5	7.7	7.7	7.9
18-19 YEARS.....	203	3,206	7.1	.4	6.4	6.6	6.7	6.9	7.1	7.3	7.5	7.6	7.6
20-24 YEARS.....	423	7,094	7.1	.4	6.3	6.5	6.7	6.8	7.1	7.3	7.5	7.6	7.8
25-34 YEARS.....	672	11,594	7.2	.4	6.4	6.6	6.8	6.9	7.2	7.4	7.6	7.7	7.9
35-44 YEARS.....	569	9,516	7.2	.4	6.6	6.7	6.9	7.0	7.2	7.5	7.6	7.7	8.0
45-54 YEARS.....	628	10,039	7.3	.4	6.6	6.8	6.9	7.0	7.3	7.5	7.7	7.8	7.9
55-64 YEARS.....	505	8,275	7.3	.4	6.7	6.8	6.9	7.0	7.3	7.6	7.7	7.8	8.0
65-74 YEARS.....	1,344	4,970	7.3	.4	6.6	6.8	6.9	7.0	7.3	7.6	7.7	7.8	8.0
<u>BLACK</u>													
18-74 YEARS.....	847	5,753	7.2	.5	6.5	6.7	6.8	7.0	7.2	7.5	7.7	7.8	8.0
18-19 YEARS.....	52	404	7.0	.4	6.4	6.5	6.5	6.7	7.1	7.3	7.6	7.7	7.9
20-24 YEARS.....	80	866	7.2	.5	6.3	6.6	6.9	7.0	7.3	7.4	7.5	7.7	7.7
25-34 YEARS.....	119	1,232	7.2	.4	6.6	6.7	6.8	6.9	7.1	7.5	7.6	7.7	7.9
35-44 YEARS.....	87	1,005	7.3	.4	6.5	6.7	6.9	7.1	7.3	7.7	7.8	7.9	8.0
45-54 YEARS.....	130	1,057	7.3	.4	6.7	6.8	7.0	7.0	7.2	7.5	7.6	7.7	8.0
55-64 YEARS.....	85	703	7.3	.5	6.8	6.8	6.9	7.0	7.2	7.5	7.8	7.9	8.1
65-74 YEARS.....	294	486	7.4	.5	6.6	6.8	6.9	7.1	7.4	7.6	7.8	7.9	8.1

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 16. NUMBER OF FEMALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR ELBOW BREADTH, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>ELBOW BREADTH IN CENTIMETERS</b>													
<u>ALL RACES</u> <sup>1</sup>													
18-74 YEARS....	8,410	67,837	6.3	.5	5.6	5.7	5.8	6.0	6.2	6.5	6.7	6.9	7.1
18-19 YEARS.....	280	3,679	6.1	.4	5.5	5.6	5.7	5.8	6.1	6.3	6.4	6.6	6.7
20-24 YEARS.....	1,243	9,215	6.1	.4	5.4	5.6	5.7	5.8	6.1	6.3	6.4	6.5	6.7
25-34 YEARS.....	1,896	13,933	6.2	.4	5.6	5.7	5.8	5.9	6.1	6.4	6.5	6.6	6.8
35-44 YEARS.....	1,664	11,593	6.3	.4	5.6	5.8	5.9	6.0	6.2	6.5	6.7	6.8	7.1
45-54 YEARS.....	836	12,163	6.4	.5	5.7	5.9	5.9	6.1	6.4	6.7	6.8	6.9	7.2
55-64 YEARS.....	665	9,976	6.5	.5	5.8	6.0	6.0	6.2	6.4	6.7	6.9	7.0	7.3
65-74 YEARS.....	1,822	7,277	6.4	.4	5.8	5.9	6.0	6.2	6.4	6.7	6.9	7.0	7.2
<u>WHITE</u>													
18-74 YEARS.....	6,757	59,923	6.3	.4	5.6	5.7	5.8	6.0	6.2	6.5	6.7	6.8	7.0
18-19 YEARS.....	208	3,159	6.1	.4	5.5	5.6	5.7	5.8	6.1	6.3	6.4	6.6	6.7
20-24 YEARS.....	956	7,972	6.1	.4	5.4	5.6	5.7	5.8	6.1	6.3	6.4	6.5	6.6
25-34 YEARS.....	1,539	12,161	6.1	.4	5.6	5.7	5.8	5.9	6.1	6.4	6.5	6.6	6.8
35-44 YEARS.....	1,302	10,111	6.3	.4	5.6	5.8	5.9	6.0	6.2	6.5	6.7	6.8	7.0
45-54 YEARS.....	705	10,879	6.4	.5	5.7	5.9	5.9	6.1	6.3	6.6	6.8	6.9	7.2
55-64 YEARS.....	551	9,037	6.5	.5	5.8	6.0	6.0	6.2	6.4	6.7	6.9	7.0	7.3
65-74 YEARS.....	1,496	6,603	6.4	.4	5.8	5.9	6.0	6.2	6.4	6.7	6.9	7.0	7.2
<u>BLACK</u>													
18-74 YEARS.....	1,557	7,302	6.4	.5	5.6	5.8	5.9	6.0	6.3	6.7	6.9	7.0	7.3
18-19 YEARS.....	70	504	6.1	.4	5.5	5.7	5.7	5.8	6.1	6.4	6.7	6.7	6.8
20-24 YEARS.....	259	1,073	6.1	.4	5.2	5.7	5.7	5.9	6.2	6.4	6.5	6.7	6.8
25-34 YEARS.....	335	1,646	6.2	.4	5.4	5.7	5.8	6.0	6.2	6.5	6.7	6.7	7.0
35-44 YEARS.....	334	1,318	6.5	.5	5.8	6.0	6.1	6.2	6.5	6.8	7.0	7.1	7.3
45-54 YEARS.....	126	1,237	6.5	.5	5.9	6.0	6.0	6.2	6.4	6.9	7.0	7.2	7.5
55-64 YEARS.....	115	871	6.6	.5	5.8	6.0	6.0	6.3	6.6	7.0	7.1	7.3	7.4
65-74 YEARS.....	318	652	6.6	.5	5.9	6.0	6.1	6.3	6.6	6.9	7.1	7.2	7.4

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 17. NUMBER OF MALES AGES 2-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SITTING HEIGHT, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
SITTING HEIGHT IN CENTIMETERS													
<b>ALL RACES<sup>1</sup></b>													
2 YEARS.....	139	(2)	53.7	2.2	49.8	51.1	51.6	52.1	53.6	55.2	55.7	56.5	57.4
3 YEARS.....	308	1,807	56.7	2.4	52.4	53.9	54.3	55.3	56.8	58.3	59.0	59.6	61.0
4 YEARS.....	304	1,815	59.9	2.7	55.2	56.3	57.1	58.0	59.9	61.6	62.8	63.3	64.6
5 YEARS.....	273	1,563	62.4	2.7	58.1	59.1	59.6	60.3	62.6	64.5	65.1	66.0	66.6
6 YEARS.....	179	1,673	64.4	3.3	58.7	59.9	61.3	62.5	64.3	66.6	68.1	69.0	69.5
7 YEARS.....	164	1,979	67.3	3.4	62.1	63.4	64.0	65.4	67.6	69.4	70.5	71.5	72.6
8 YEARS.....	152	1,861	68.9	2.7	64.3	65.7	66.2	67.5	68.7	71.0	72.0	72.6	73.1
9 YEARS.....	169	2,019	71.6	3.5	65.9	66.8	67.8	69.6	71.3	73.8	75.0	75.7	77.4
10 YEARS.....	184	2,205	73.5	3.1	67.8	69.1	70.5	71.6	73.7	75.7	76.7	77.1	78.6
11 YEARS.....	178	2,177	75.7	3.5	70.1	71.8	72.6	73.5	75.4	78.0	79.0	79.8	81.0
12 YEARS.....	200	2,304	78.6	4.2	72.9	73.4	74.1	75.4	78.2	81.5	82.5	84.3	86.2
13 YEARS.....	174	1,978	81.8	5.0	73.9	75.5	76.3	78.6	81.3	85.1	86.5	88.3	90.8
14 YEARS.....	174	2,030	85.4	4.3	77.6	80.3	81.3	82.6	85.9	88.6	89.6	90.5	91.6
15 YEARS.....	171	2,093	87.7	4.7	78.6	80.8	82.7	85.0	88.0	90.6	92.3	94.1	95.0
16 YEARS.....	169	2,019	90.3	4.4	81.6	85.1	86.0	87.7	90.6	93.5	94.8	95.1	97.0
17 YEARS.....	176	2,095	91.5	3.8	85.6	86.7	87.1	89.0	91.9	94.2	95.1	95.6	97.9
<b>WHITE</b>													
2 YEARS.....	108	(2)	54.0	2.2	49.8	51.6	52.0	52.7	54.0	55.3	56.0	56.6	57.9
3 YEARS.....	226	1,536	56.9	2.2	53.4	54.3	54.6	55.4	57.2	58.4	59.2	59.7	61.0
4 YEARS.....	229	1,547	60.2	2.6	55.9	57.0	57.4	58.2	60.1	61.9	62.9	63.6	64.8
5 YEARS.....	207	1,319	62.6	2.8	58.1	59.4	59.6	60.6	62.9	64.6	65.1	66.1	66.7
6 YEARS.....	126	1,343	64.7	3.1	59.5	61.3	61.5	62.8	64.6	66.7	68.4	69.0	69.6
7 YEARS.....	125	1,718	67.5	3.3	62.8	63.6	64.1	65.6	67.8	69.6	70.6	71.5	72.1
8 YEARS.....	116	1,644	69.0	2.6	64.6	65.9	66.7	67.6	68.6	71.0	72.1	72.6	73.1
9 YEARS.....	117	1,636	71.9	3.5	65.9	66.5	67.8	69.9	71.4	74.1	75.1	76.6	78.6
10 YEARS.....	148	1,909	73.8	2.8	68.7	70.1	70.8	72.1	73.7	76.0	76.7	77.1	78.5
11 YEARS.....	132	1,823	75.8	3.5	70.1	71.6	72.7	73.6	75.5	78.0	79.3	79.9	81.1
12 YEARS.....	152	1,970	79.0	4.0	73.0	73.8	74.5	75.6	78.5	81.7	83.1	84.5	86.2
13 YEARS.....	129	1,697	82.3	4.9	74.3	75.6	77.2	79.1	82.3	85.5	86.6	89.0	91.2
14 YEARS.....	134	1,730	85.9	3.9	79.6	81.0	82.1	83.1	86.3	88.7	89.8	90.6	92.4
15 YEARS.....	124	1,728	88.2	4.9	78.5	80.6	83.5	85.5	88.4	91.7	93.7	94.3	95.3
16 YEARS.....	128	1,752	90.9	4.2	84.6	85.5	86.8	88.5	91.2	93.6	94.8	95.1	97.0
17 YEARS.....	139	1,831	92.0	3.5	86.6	87.0	88.0	89.6	92.1	94.5	95.3	96.1	98.2
<b>BLACK</b>													
2 YEARS.....	29	(2)	51.9	1.6	48.4	50.3	50.8	51.5	52.0	52.1	53.1	53.3	54.5
3 YEARS.....	72	212	55.3	2.9	51.3	52.1	52.4	53.6	55.1	57.1	58.2	58.6	61.0
4 YEARS.....	74	260	58.4	3.1	53.7	54.4	54.7	55.8	59.0	60.2	62.1	62.8	63.1
5 YEARS.....	64	226	61.3	2.3	57.9	59.0	59.1	59.5	61.2	62.6	63.8	64.5	64.7
6 YEARS.....	52	321	62.9	3.6	57.3	57.3	58.6	60.6	63.8	65.7	67.1	67.4	69.0
7 YEARS.....	38	253	66.2	3.8	60.4	60.7	62.1	63.2	66.5	68.5	69.4	73.6	73.7
8 YEARS.....	33	203	68.3	2.5	64.3	65.0	65.7	66.2	69.1	70.0	71.1	71.2	73.0
9 YEARS.....	52	383	70.3	2.7	65.3	67.1	67.9	68.5	70.5	71.9	73.4	73.6	74.6
10 YEARS.....	33	251	71.6	4.2	65.1	65.1	66.8	68.5	72.5	74.6	76.7	77.4	78.9
11 YEARS.....	43	313	75.0	3.0	71.8	71.9	72.0	73.0	74.9	76.8	78.5	78.6	79.6
12 YEARS.....	47	316	76.3	4.3	69.1	70.0	71.7	72.9	76.9	79.0	81.0	81.1	84.2
13 YEARS.....	45	281	78.9	4.4	71.3	72.3	75.5	75.8	79.1	81.4	83.1	84.6	86.1
14 YEARS.....	39	282	83.1	4.4	76.3	77.4	79.5	80.1	82.0	86.9	89.5	89.6	90.4
15 YEARS.....	43	310	85.0	2.8	79.7	81.6	82.2	82.7	85.0	86.9	88.0	88.1	89.8
16 YEARS.....	41	267	86.8	4.3	81.1	81.3	81.6	83.6	87.0	88.3	90.8	91.6	97.3
17 YEARS.....	35	235	88.1	3.6	81.5	81.6	85.0	85.3	89.0	90.1	92.4	93.0	93.8

<sup>1</sup> INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

<sup>2</sup> POPULATION NOT INCLUDED BECAUSE OF POSSIBLE BIAS DUE TO MISSING VALUES.

TABLE 18. NUMBER OF FEMALES AGES 2-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SITTING HEIGHT, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE									
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH	
<b>SITTING HEIGHT IN CENTIMETERS</b>														
<b>ALL RACES<sup>1</sup></b>														
2 YEARS.....	110	(2)	52.7	2.3	49.2	49.6	50.0	50.9	52.8	54.2	54.8	56.1	57.2	
3 YEARS.....	292	1,701	55.7	2.4	51.8	52.7	53.5	54.3	55.6	57.3	58.3	58.7	59.6	
4 YEARS.....	281	1,599	58.2	2.6	54.2	54.9	55.7	56.5	58.3	59.7	60.7	61.4	63.0	
5 YEARS.....	314	1,695	61.8	2.8	57.0	58.3	59.1	60.0	61.7	63.3	64.3	65.4	66.9	
6 YEARS.....	176	1,787	63.8	2.9	59.4	60.8	61.1	61.5	63.6	66.0	66.9	67.5	68.1	
7 YEARS.....	169	1,754	66.8	3.1	62.2	63.1	63.7	64.7	66.6	69.0	70.3	71.3	72.1	
8 YEARS.....	152	1,800	68.6	3.2	63.1	64.5	64.7	66.5	68.2	70.7	72.1	72.6	73.9	
9 YEARS.....	171	2,017	71.5	3.3	66.3	67.2	68.4	69.1	71.4	73.6	74.9	75.7	77.0	
10 YEARS.....	197	2,173	73.0	3.8	66.5	68.8	69.3	70.6	72.6	75.2	76.1	77.6	80.9	
11 YEARS.....	166	1,911	76.8	4.2	69.8	71.5	72.5	73.7	76.6	80.1	81.1	82.4	84.0	
12 YEARS.....	177	1,812	80.0	4.0	71.9	74.5	76.3	77.2	80.5	82.9	83.9	84.7	86.2	
13 YEARS.....	198	2,175	82.7	3.3	77.4	78.1	78.7	80.3	83.0	85.0	86.3	87.1	88.7	
14 YEARS.....	184	2,036	84.1	3.3	78.6	79.8	80.6	82.0	84.0	86.7	87.7	88.1	89.8	
15 YEARS.....	171	2,163	85.6	3.4	79.7	82.0	82.9	83.5	85.3	87.6	89.1	90.1	91.5	
16 YEARS.....	175	2,145	85.4	3.2	80.3	81.1	82.3	83.3	85.6	87.8	88.7	89.5	90.8	
17 YEARS.....	157	1,804	85.8	3.3	79.6	81.2	82.0	83.7	86.2	88.1	88.8	89.1	91.4	
<b>WHITE</b>														
2 YEARS.....	81	(2)	52.7	2.3	49.2	49.6	50.1	50.9	52.8	54.2	54.8	56.1	57.1	
3 YEARS.....	211	1,438	55.9	2.4	51.9	52.9	53.6	54.5	55.9	57.4	58.4	58.8	59.6	
4 YEARS.....	204	1,339	58.3	2.5	54.2	55.1	55.9	56.8	58.3	59.8	60.7	61.1	62.8	
5 YEARS.....	224	1,416	61.9	2.8	57.3	58.6	59.3	60.1	61.8	63.4	64.5	65.5	67.0	
6 YEARS.....	125	1,445	63.9	2.9	59.4	60.8	61.1	61.5	63.8	66.3	67.0	67.5	68.1	
7 YEARS.....	122	1,507	67.1	3.1	62.8	63.2	63.9	64.7	66.7	69.1	70.5	71.5	72.1	
8 YEARS.....	117	1,507	68.8	3.2	63.7	64.5	65.1	66.6	69.1	71.0	72.2	73.2	74.0	
9 YEARS.....	129	1,751	71.8	3.3	66.3	67.8	68.7	69.8	71.6	73.6	75.4	75.9	77.1	
10 YEARS.....	148	1,855	73.1	3.6	67.9	69.0	69.5	71.1	72.8	75.2	76.1	77.5	80.0	
11 YEARS.....	122	1,569	77.3	4.0	69.9	72.5	73.1	74.4	77.1	80.3	81.5	82.5	83.9	
12 YEARS.....	128	1,506	80.6	3.7	74.1	76.3	76.6	78.0	80.9	83.1	84.1	84.9	86.7	
13 YEARS.....	153	1,886	83.0	3.3	77.4	78.3	79.3	80.6	83.2	85.2	86.5	87.3	88.0	
14 YEARS.....	132	1,731	84.5	3.1	79.0	80.4	81.1	82.6	84.8	87.0	87.8	88.1	88.9	
15 YEARS.....	125	1,752	86.3	3.3	80.9	82.7	83.4	84.1	86.1	88.1	89.4	90.9	92.4	
16 YEARS.....	141	1,933	85.6	3.1	80.7	81.4	82.3	83.4	85.7	88.0	89.0	89.6	90.9	
17 YEARS.....	117	1,549	86.1	3.0	81.2	81.9	82.9	84.6	86.3	88.1	88.9	89.5	91.5	
<b>BLACK</b>														
2 YEARS.....	26	(2)	52.7	2.6	48.4	49.5	49.8	50.9	52.3	54.7	55.8	55.9	57.2	
3 YEARS.....	78	245	54.6	2.2	51.5	51.8	52.0	53.0	54.9	56.1	56.6	57.1	57.4	
4 YEARS.....	73	246	57.8	3.0	52.6	54.0	54.7	55.7	58.1	59.6	61.6	62.4	63.0	
5 YEARS.....	88	265	60.9	2.9	56.0	56.5	58.3	59.1	60.9	62.4	63.3	64.7	66.9	
6 YEARS.....	50	336	63.4	2.6	59.9	60.6	61.1	61.1	62.8	64.6	66.2	67.4	67.8	
7 YEARS.....	46	241	65.2	3.0	60.7	61.1	61.4	63.3	65.1	67.3	68.7	69.6	70.5	
8 YEARS.....	35	293	67.1	2.7	62.2	64.3	64.6	65.5	67.4	68.8	70.6	71.0	71.1	
9 YEARS.....	41	247	69.2	2.8	65.5	66.3	66.3	66.6	68.7	71.1	72.8	73.5	74.1	
10 YEARS.....	48	303	72.1	4.7	65.3	65.5	66.5	70.0	70.6	74.9	76.8	81.4	81.5	
11 YEARS.....	42	315	75.2	4.3	70.0	70.6	71.1	72.2	74.0	79.2	80.2	80.2	84.3	
12 YEARS.....	47	284	76.8	4.0	71.5	71.6	71.7	72.6	76.4	79.8	80.6	81.7	83.4	
13 YEARS.....	44	287	80.6	2.6	76.2	78.1	78.6	78.7	80.5	81.5	84.5	84.6	85.2	
14 YEARS.....	50	265	81.8	3.1	75.7	76.9	78.1	79.5	82.9	84.0	84.6	85.2	85.9	
15 YEARS.....	46	411	82.7	2.4	79.0	79.4	79.7	81.6	83.5	83.6	84.5	84.6	86.1	
16 YEARS.....	33	203	83.5	2.8	78.6	80.2	80.3	81.9	83.6	85.6	86.9	87.5	88.6	
17 YEARS.....	39	239	83.0	3.8	78.4	79.0	79.5	80.0	82.5	85.7	86.9	88.4	88.5	

<sup>1</sup> INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

<sup>2</sup> POPULATION NOT INCLUDED BECAUSE OF POSSIBLE BIAS DUE TO MISSING VALUES.

TABLE 19. NUMBER OF MALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SITTING HEIGHT, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
SITTING HEIGHT IN CENTIMETERS													
<b>ALL RACES<sup>1</sup></b>													
18-74 YEARS...	5,261	61,280	91.7	3.9	85.3	86.8	87.7	89.3	91.8	94.1	95.6	96.6	97.8
18-19 YEARS.....	260	3,673	91.7	3.7	85.3	87.9	88.5	89.8	92.1	93.8	94.9	95.7	96.9
20-24 YEARS.....	513	8,110	92.6	4.0	86.1	87.6	88.8	90.2	92.5	95.0	96.6	97.6	99.0
25-34 YEARS.....	804	13,003	92.7	3.9	86.3	87.6	88.5	90.4	92.8	95.5	97.0	97.5	98.8
35-44 YEARS.....	664	10,676	92.0	3.5	86.5	87.5	88.4	89.8	92.1	94.2	95.6	96.6	97.6
45-54 YEARS.....	765	11,150	91.6	3.6	85.3	86.5	87.8	89.5	91.7	93.9	95.3	96.1	97.5
55-64 YEARS.....	598	9,073	90.6	3.7	84.8	86.1	87.1	88.3	90.8	92.9	94.0	94.8	96.4
65-74 YEARS.....	1,657	5,496	89.1	3.7	82.8	84.4	85.3	86.6	89.2	91.5	92.7	93.8	95.0
<b>WHITE</b>													
18-74 YEARS.....	4,344	54,694	92.0	3.8	85.9	87.4	88.3	89.7	92.0	94.3	96.0	96.8	98.0
18-19 YEARS.....	203	3,206	92.2	3.3	87.1	88.5	89.5	90.4	92.5	94.0	95.5	96.0	97.1
20-24 YEARS.....	423	7,094	93.0	3.3	87.1	88.2	89.4	90.6	92.8	95.3	96.8	97.8	99.3
25-34 YEARS.....	672	11,594	93.2	3.7	87.4	88.4	89.5	91.0	93.1	95.7	97.1	97.6	99.0
35-44 YEARS.....	569	9,516	92.3	3.4	87.0	88.0	88.8	90.2	92.3	94.4	96.0	96.6	97.8
45-54 YEARS.....	628	10,039	92.0	3.4	85.9	87.5	88.5	89.9	92.1	94.1	95.6	96.1	97.8
55-64 YEARS.....	505	8,275	90.8	3.6	85.0	86.8	87.4	88.6	91.0	93.1	94.2	95.0	96.5
65-74 YEARS.....	1,344	4,970	89.3	3.6	83.5	84.8	85.6	87.0	89.5	91.6	93.0	93.9	95.2
<b>BLACK</b>													
18-74 YEARS.....	847	5,753	88.6	3.8	82.1	83.9	85.0	86.0	88.5	91.1	92.7	93.3	94.7
18-19 YEARS.....	52	404	87.6	3.7	81.1	81.6	82.1	85.1	88.2	90.5	91.9	92.4	92.8
20-24 YEARS.....	80	866	89.7	4.3	83.4	84.3	85.6	87.0	88.8	92.5	93.6	94.7	97.2
25-34 YEARS.....	119	1,232	89.0	3.6	83.4	85.0	85.7	86.3	88.5	91.7	92.7	93.5	95.5
35-44 YEARS.....	87	1,005	89.5	3.7	82.1	84.5	85.7	86.9	89.7	92.8	93.3	94.0	94.7
45-54 YEARS.....	130	1,057	88.0	3.4	83.5	84.0	84.5	85.7	88.0	90.5	91.5	92.0	93.1
55-64 YEARS.....	85	703	88.3	3.3	83.3	84.0	85.1	85.6	88.3	90.8	92.7	93.4	94.0
65-74 YEARS.....	294	486	86.3	3.6	79.8	82.0	82.6	84.1	86.7	88.9	89.6	90.6	91.8

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 20. NUMBER OF FEMALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SITTING HEIGHT, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
SITTING HEIGHT IN CENTIMETERS													
<b>ALL RACES<sup>1</sup></b>													
18-74 YEARS...	8,410	67,837	85.6	3.5	79.7	81.3	82.1	83.3	85.7	87.9	89.1	89.9	91.1
18-19 YEARS.....	280	3,679	86.5	3.1	81.7	82.6	83.3	84.6	86.8	88.7	89.6	90.1	91.6
20-24 YEARS.....	1,243	9,215	86.2	3.4	80.5	82.0	82.7	83.9	86.4	88.4	89.5	90.3	91.6
25-34 YEARS.....	1,896	13,933	86.4	3.4	81.0	82.3	83.1	84.3	86.4	88.7	89.9	90.7	92.1
35-44 YEARS.....	1,664	11,593	86.4	3.4	81.1	82.1	83.0	84.2	86.5	88.6	89.8	90.7	92.2
45-54 YEARS.....	836	12,163	85.8	3.1	81.0	82.1	82.6	83.9	85.9	87.8	89.0	89.6	90.6
55-64 YEARS.....	669	9,976	84.3	3.4	78.6	80.3	81.3	82.2	84.5	86.6	87.6	88.3	89.3
65-74 YEARS.....	1,822	7,277	82.7	3.5	76.9	78.5	79.3	80.6	82.9	85.1	86.3	87.0	88.1
<b>WHITE</b>													
18-74 YEARS.....	6,757	59,923	85.8	3.5	80.2	81.6	82.5	83.6	86.0	88.1	89.3	90.1	91.3
18-19 YEARS.....	208	3,159	87.0	2.8	82.5	83.2	84.3	84.9	87.1	89.1	89.8	90.5	91.7
20-24 YEARS.....	956	7,972	86.6	3.2	81.6	82.6	83.5	84.5	86.9	88.6	89.7	90.5	91.7
25-34 YEARS.....	1,539	12,161	86.8	3.3	81.6	82.7	83.6	84.7	86.6	89.0	90.1	91.1	92.3
35-44 YEARS.....	1,302	10,111	86.7	3.3	81.6	82.7	83.4	84.6	86.6	88.8	90.1	90.9	92.4
45-54 YEARS.....	705	10,879	86.0	3.0	81.4	82.3	82.9	84.0	86.1	88.0	89.1	89.8	90.6
55-64 YEARS.....	551	9,037	84.5	3.3	79.0	80.6	81.5	82.5	84.6	86.6	87.7	88.4	89.3
65-74 YEARS.....	1,496	6,603	82.9	3.5	77.1	78.8	79.6	80.9	83.1	85.2	86.4	87.1	88.1
<b>BLACK</b>													
18-74 YEARS.....	1,557	7,302	83.5	3.3	78.1	79.2	80.1	81.3	83.6	85.6	86.7	87.6	89.1
18-19 YEARS.....	70	504	83.6	3.0	76.3	79.6	81.5	81.9	83.9	85.4	85.5	87.2	88.4
20-24 YEARS.....	259	1,073	83.4	3.3	78.2	79.6	80.1	81.0	83.1	85.5	87.0	87.6	89.2
25-34 YEARS.....	335	1,646	84.0	3.0	79.2	80.1	80.6	81.8	84.2	86.0	87.1	88.1	89.1
35-44 YEARS.....	334	1,318	84.6	3.4	79.6	80.6	81.3	82.1	84.7	86.8	88.1	89.1	90.2
45-54 YEARS.....	126	1,237	83.9	2.9	78.6	79.2	81.0	82.4	84.4	86.0	86.6	87.0	87.8
55-64 YEARS.....	115	871	82.3	3.3	75.6	78.2	79.2	80.4	82.3	84.5	86.0	86.1	87.5
65-74 YEARS.....	318	652	80.9	3.3	75.5	77.0	78.0	78.8	81.0	83.1	84.3	85.0	86.2

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 21. NUMBER OF MALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR BITROCHANTERIC BREADTH, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>ALL RACES<sup>1</sup></b>					<b>BITROCHANTERIC BREADTH IN CENTIMETERS</b>								
1 YEAR.....	286	1,693	15.1	1.0	13.5	13.8	14.0	14.3	15.0	15.8	16.1	16.3	16.7
2 YEARS.....	298	1,747	15.9	1.2	13.8	14.5	14.7	15.2	15.9	16.7	17.2	17.4	17.9
3 YEARS.....	308	1,807	16.9	1.2	15.2	15.5	15.8	16.2	17.0	17.7	18.1	18.3	18.6
4 YEARS.....	304	1,815	18.0	1.3	16.0	16.4	16.6	17.0	18.0	18.8	19.3	19.5	20.5
5 YEARS.....	273	1,563	18.9	1.2	17.0	17.4	17.8	18.2	18.9	19.7	20.0	20.3	21.0
6 YEARS.....	179	1,673	19.4	1.4	17.3	18.0	18.2	18.6	19.5	20.3	20.7	21.0	21.4
7 YEARS.....	164	1,979	20.6	1.5	18.0	18.8	19.1	19.5	20.5	21.6	22.1	22.3	22.8
8 YEARS.....	152	1,861	21.1	1.6	18.7	19.0	19.5	20.3	21.0	22.1	22.6	23.0	23.8
9 YEARS.....	169	2,019	22.7	2.1	19.6	20.2	20.6	21.4	22.5	23.8	24.5	24.8	26.0
10 YEARS.....	184	2,205	23.6	1.9	20.6	21.4	21.8	22.4	23.5	24.6	25.4	26.2	27.1
11 YEARS.....	178	2,177	24.4	2.2	21.0	22.3	22.6	23.2	24.0	25.5	26.4	27.0	28.3
12 YEARS.....	200	2,304	26.4	2.2	22.5	23.5	24.1	24.7	25.9	27.3	28.1	28.8	29.5
13 YEARS.....	174	1,978	27.4	2.3	23.7	24.3	25.1	25.8	27.4	28.9	30.0	30.5	31.5
14 YEARS.....	174	2,030	28.9	2.3	25.4	26.0	26.6	27.5	29.0	30.5	31.4	31.8	32.1
15 YEARS.....	171	2,093	30.0	2.2	26.2	27.0	27.6	28.6	30.3	31.4	32.0	32.5	33.1
16 YEARS.....	169	2,019	31.0	2.2	27.2	28.2	28.8	29.6	31.1	32.6	33.1	33.5	34.2
17 YEARS.....	176	2,095	31.0	2.2	27.6	28.3	28.7	29.8	31.2	32.3	32.9	33.7	34.4
<b>WHITE</b>													
1 YEAR.....	211	1,402	15.0	1.0	13.6	13.9	14.0	14.3	15.1	15.8	16.1	16.3	16.5
2 YEARS.....	217	1,461	15.9	1.2	13.8	14.6	14.8	15.2	15.9	16.6	17.1	17.4	17.6
3 YEARS.....	226	1,536	17.0	1.2	15.4	15.6	15.8	16.2	17.0	17.7	18.1	18.3	18.6
4 YEARS.....	229	1,547	18.0	1.2	16.1	16.5	16.6	17.3	18.0	18.8	19.2	19.5	19.9
5 YEARS.....	207	1,319	19.0	1.2	17.0	17.4	17.8	18.3	19.0	19.8	20.1	20.4	21.1
6 YEARS.....	126	1,343	19.5	1.4	17.4	18.1	18.3	18.6	19.4	20.3	20.8	21.0	21.4
7 YEARS.....	125	1,718	20.6	1.4	18.3	18.9	19.1	19.5	20.6	21.6	22.1	22.2	23.0
8 YEARS.....	116	1,644	21.1	1.5	18.8	19.0	19.5	20.3	21.0	22.0	22.6	23.0	23.8
9 YEARS.....	117	1,636	22.7	2.1	19.5	20.2	20.6	21.5	22.5	23.9	24.5	24.8	26.0
10 YEARS.....	148	1,909	23.6	1.8	21.1	21.7	21.9	22.4	23.5	24.6	25.4	26.2	26.6
11 YEARS.....	132	1,823	24.5	2.2	21.3	22.4	22.9	23.2	24.0	25.6	26.6	27.1	28.9
12 YEARS.....	152	1,970	26.1	2.1	22.7	23.9	24.3	24.7	26.0	27.4	28.3	28.8	29.5
13 YEARS.....	129	1,697	27.6	2.3	24.1	24.8	25.3	25.8	27.5	29.0	30.2	30.6	31.7
14 YEARS.....	134	1,730	29.2	2.2	25.5	26.2	27.0	27.6	29.3	30.7	31.6	31.8	32.4
15 YEARS.....	124	1,728	30.1	2.3	26.2	27.0	27.7	28.7	30.3	31.4	32.1	32.6	33.4
16 YEARS.....	128	1,752	31.1	2.2	27.2	28.2	29.1	30.0	31.5	32.6	33.1	33.6	34.6
17 YEARS.....	139	1,831	31.2	2.1	27.8	28.5	29.4	30.0	31.4	32.4	33.2	33.8	34.5
<b>BLACK</b>													
1 YEAR.....	72	280	15.1	1.3	13.4	13.4	13.8	14.3	14.9	16.1	16.5	16.9	17.4
2 YEARS.....	77	267	16.2	1.5	14.2	14.4	14.5	15.0	16.0	17.5	17.8	19.1	19.1
3 YEARS.....	72	212	16.7	1.3	14.9	15.1	15.5	16.0	16.7	17.4	18.1	18.2	18.7
4 YEARS.....	74	260	17.8	1.7	15.6	15.6	16.1	16.5	17.7	19.1	19.8	20.5	20.6
5 YEARS.....	64	226	18.7	1.3	16.4	16.8	17.3	18.0	18.6	19.5	19.7	20.0	20.1
6 YEARS.....	52	321	19.3	1.5	16.7	16.7	17.8	18.7	19.5	20.1	20.5	20.9	21.6
7 YEARS.....	38	253	20.1	1.6	17.5	17.9	18.6	18.9	19.5	21.7	22.4	22.6	22.6
8 YEARS.....	33	203	21.4	1.7	18.5	18.5	19.5	20.5	21.4	22.5	22.8	23.2	24.2
9 YEARS.....	52	383	22.3	2.0	19.8	19.9	20.6	21.2	22.3	22.9	23.9	24.2	28.2
10 YEARS.....	33	251	23.3	2.2	20.0	20.3	20.6	21.2	23.5	24.5	25.4	25.6	25.6
11 YEARS.....	43	313	24.0	2.1	21.0	21.0	21.4	22.7	23.7	25.4	25.5	25.6	26.9
12 YEARS.....	47	316	25.5	2.6	22.0	22.5	23.0	24.1	25.1	26.4	27.7	27.7	30.6
13 YEARS.....	45	281	26.4	2.2	22.3	23.1	23.1	25.1	27.4	28.2	28.4	28.4	28.7
14 YEARS.....	39	282	27.8	1.7	25.3	26.1	26.1	26.7	27.6	28.7	28.8	29.0	31.4
15 YEARS.....	43	310	29.5	2.0	26.2	27.0	27.2	28.3	29.5	30.8	31.6	32.5	32.6
16 YEARS.....	41	267	30.0	1.8	27.8	28.4	28.4	28.8	29.5	30.4	32.6	33.5	33.6
17 YEARS.....	35	235	29.6	2.3	26.0	26.4	27.0	27.0	30.0	31.6	32.6	32.8	33.1

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 22. NUMBER OF FEMALES AGES 1-17 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR BITROCHANTERIC BREADTH, BY RACE AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>BITROCHANTERIC BREADTH IN CENTIMETERS</b>													
<b>ALL RACES<sup>1</sup></b>													
1 YEAR.....	267	1,620	14.8	1.3	12.5	13.0	13.6	14.1	14.8	15.6	16.0	16.4	16.6
2 YEARS.....	272	1,708	15.8	1.2	13.7	14.5	14.7	15.1	15.8	16.5	16.8	17.3	17.9
3 YEARS.....	292	1,701	16.8	1.1	15.0	15.5	15.8	16.2	16.9	17.4	18.0	18.2	18.6
4 YEARS.....	281	1,599	17.8	1.4	15.6	16.3	16.5	16.9	17.9	18.5	19.0	19.5	19.7
5 YEARS.....	314	1,695	18.8	1.6	16.6	17.0	17.4	17.8	18.7	19.5	20.3	20.8	21.6
6 YEARS.....	176	1,787	19.6	1.2	17.5	18.0	18.5	18.7	19.6	20.4	20.7	21.0	21.4
7 YEARS.....	169	1,754	20.6	1.5	18.5	19.2	19.3	19.7	20.5	21.2	21.9	22.9	23.5
8 YEARS.....	152	1,800	21.8	2.3	19.1	19.6	20.0	20.4	21.6	22.8	23.6	24.1	25.1
9 YEARS.....	171	2,017	23.3	2.4	20.4	20.9	21.3	21.7	23.0	24.4	25.1	25.8	26.9
10 YEARS.....	197	2,173	23.7	1.8	21.3	21.7	21.9	22.5	23.5	24.6	25.5	26.1	27.4
11 YEARS.....	166	1,911	25.8	2.5	22.0	22.5	23.3	24.1	25.7	27.4	28.4	29.3	30.4
12 YEARS.....	177	1,812	27.8	2.5	23.6	24.4	24.9	25.9	28.0	29.4	30.3	30.8	32.5
13 YEARS.....	198	2,175	29.0	2.2	25.8	26.4	26.5	27.4	29.1	30.4	31.1	31.4	32.4
14 YEARS.....	184	2,036	29.8	2.3	26.2	26.9	27.6	28.6	29.9	31.0	31.7	32.4	34.0
15 YEARS.....	171	2,163	30.1	1.9	27.2	27.8	28.4	28.9	30.0	31.3	31.8	32.0	33.0
16 YEARS.....	175	2,145	30.5	2.2	27.8	28.0	28.3	29.0	30.0	31.8	32.9	33.5	34.3
17 YEARS.....	157	1,804	31.0	2.1	28.0	29.0	29.2	29.7	31.2	32.2	33.0	33.7	34.3
<b>WHITE</b>													
1 YEAR.....	189	1,328	14.8	1.3	12.5	12.9	13.5	14.1	14.8	15.6	16.0	16.4	16.8
2 YEARS.....	203	1,434	15.9	1.2	14.0	14.5	14.7	15.2	15.9	16.5	16.8	17.3	17.8
3 YEARS.....	211	1,438	16.8	1.0	15.0	15.5	15.8	16.2	16.8	17.4	17.8	18.2	18.6
4 YEARS.....	204	1,339	17.8	1.4	15.7	16.3	16.5	16.9	17.9	18.5	18.8	19.3	19.7
5 YEARS.....	224	1,416	18.8	1.6	16.6	17.1	17.5	17.9	18.6	19.5	20.2	20.8	21.2
6 YEARS.....	125	1,445	19.5	1.2	17.5	17.8	18.4	18.6	19.6	20.3	20.6	20.9	21.5
7 YEARS.....	122	1,507	20.6	1.6	18.5	19.2	19.3	19.6	20.5	21.2	21.9	22.9	23.5
8 YEARS.....	117	1,507	21.9	2.4	19.1	19.2	20.0	20.4	21.6	23.0	23.8	24.2	25.1
9 YEARS.....	129	1,751	23.4	2.5	20.4	21.0	21.4	21.7	23.2	24.4	25.2	25.9	27.3
10 YEARS.....	148	1,855	23.7	1.8	21.5	21.7	21.9	22.5	23.5	24.6	25.5	25.9	27.3
11 YEARS.....	122	1,569	26.0	2.5	22.0	22.7	23.7	24.3	25.8	27.5	28.7	29.4	30.4
12 YEARS.....	128	1,506	27.8	2.3	24.1	24.7	25.4	25.9	28.0	29.4	30.3	30.8	31.3
13 YEARS.....	153	1,886	29.1	2.2	25.8	26.2	26.6	27.5	29.4	30.5	31.1	31.4	32.1
14 YEARS.....	132	1,731	29.9	2.3	26.2	26.8	27.6	28.7	30.0	31.0	31.7	32.4	34.4
15 YEARS.....	125	1,752	30.3	1.8	27.3	28.1	28.5	29.2	30.3	31.5	31.9	32.1	33.0
16 YEARS.....	141	1,933	30.5	2.0	27.8	28.0	28.3	29.0	30.0	31.7	32.6	33.4	34.1
17 YEARS.....	117	1,549	31.1	2.0	28.2	29.0	29.2	29.7	31.2	32.2	33.0	33.6	34.0
<b>BLACK</b>													
1 YEAR.....	73	257	14.9	1.2	12.6	13.0	13.8	14.2	14.7	15.7	16.2	16.5	16.5
2 YEARS.....	66	261	15.5	1.4	12.9	13.5	14.0	14.6	15.4	16.5	17.2	17.5	18.0
3 YEARS.....	78	245	17.0	1.1	15.2	15.7	15.9	16.3	17.1	17.6	18.2	18.4	18.8
4 YEARS.....	73	246	17.8	1.4	15.3	15.9	16.5	16.8	17.8	19.0	19.5	19.6	19.8
5 YEARS.....	88	265	19.0	1.6	16.3	17.0	17.1	17.6	19.0	20.1	20.8	21.5	21.6
6 YEARS.....	50	336	19.8	1.1	18.2	18.5	19.0	19.1	19.8	20.6	21.0	21.1	21.4
7 YEARS.....	46	241	20.5	1.1	18.6	19.2	19.5	19.9	20.5	21.0	21.4	22.5	22.5
8 YEARS.....	35	293	21.4	1.3	19.7	19.7	20.0	20.5	21.4	22.2	23.0	23.0	23.8
9 YEARS.....	41	247	22.3	1.8	18.8	20.1	21.0	21.4	22.5	23.2	23.8	24.5	25.5
10 YEARS.....	48	303	24.0	2.1	21.3	21.3	22.3	22.4	23.9	25.2	26.2	27.0	28.0
11 YEARS.....	42	315	25.3	2.3	22.0	22.5	22.7	23.4	25.4	27.4	27.9	27.9	29.6
12 YEARS.....	47	284	27.5	3.4	22.6	22.6	23.6	24.5	27.8	29.8	32.5	32.5	32.8
13 YEARS.....	44	287	28.6	2.1	25.5	26.5	26.5	27.2	28.3	29.7	30.3	31.2	33.8
14 YEARS.....	50	265	29.4	2.2	26.8	27.1	27.2	27.9	29.7	30.5	31.9	33.0	33.1
15 YEARS.....	46	411	29.3	2.1	24.9	27.0	27.8	28.4	29.6	30.2	30.7	31.1	32.2
16 YEARS.....	33	203	31.0	3.5	27.0	27.5	28.0	28.9	30.1	32.8	34.4	36.6	36.6
17 YEARS.....	39	239	30.5	2.2	27.4	27.6	28.3	28.9	30.2	32.1	32.4	34.1	34.5

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.



TABLE 23. NUMBER OF MALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR BITROCHANTERIC BREADTH, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>BITROCHANTERIC BREADTH IN CENTIMETERS</b>													
<b>ALL RACES<sup>1</sup></b>													
18-74 YEARS...	5,261	61,180	32.7	2.0	29.5	30.2	30.7	31.4	32.7	34.0	34.7	35.2	36.0
18-19 YEARS.....	260	3,673	31.8	2.0	28.7	29.5	30.0	30.7	31.7	32.9	33.6	34.1	35.0
20-24 YEARS.....	513	8,110	32.0	2.0	29.0	29.6	30.2	30.7	31.8	33.3	34.1	34.6	35.8
25-34 YEARS.....	804	13,003	32.6	2.0	29.5	30.2	30.6	31.2	32.6	33.8	34.5	35.0	36.0
35-44 YEARS.....	664	10,676	32.9	1.9	29.6	30.2	30.8	31.6	33.0	34.1	34.9	35.4	36.0
45-54 YEARS.....	765	11,150	33.0	1.9	30.1	30.7	31.2	31.9	33.0	34.2	34.9	35.2	36.1
55-64 YEARS.....	598	9,073	33.2	1.9	30.1	30.7	31.4	31.9	33.2	34.5	34.9	35.4	36.2
65-74 YEARS.....	1,657	5,496	33.2	1.8	30.1	31.0	31.4	32.0	33.2	34.3	35.1	35.5	36.2
<b>WHITE<sup>c</sup></b>													
18-74 YEARS.....	4,344	54,694	32.9	1.9	29.9	30.5	31.0	31.6	32.8	34.1	34.7	35.3	36.1
18-19 YEARS.....	203	3,206	32.0	1.8	29.3	29.9	30.4	31.1	31.9	32.9	33.7	34.1	35.0
20-24 YEARS.....	423	7,094	32.2	1.9	29.2	29.7	30.3	30.8	32.0	33.4	34.3	34.7	35.8
25-34 YEARS.....	672	11,594	32.7	1.9	30.0	30.4	30.8	31.4	32.6	33.9	34.6	35.1	36.0
35-44 YEARS.....	569	9,516	33.0	1.9	29.9	30.5	31.0	31.8	33.1	34.2	35.0	35.4	36.1
45-54 YEARS.....	628	10,039	33.2	1.8	30.4	31.1	31.5	32.1	33.1	34.3	35.0	35.3	36.2
55-64 YEARS.....	505	8,275	33.2	1.8	30.2	31.0	31.5	32.1	33.3	34.5	34.9	35.4	36.2
65-74 YEARS.....	1,344	4,970	33.3	1.8	30.4	31.1	31.5	32.1	33.3	34.4	35.2	35.6	36.2
<b>BLACK</b>													
18-74 YEARS.....	847	5,753	31.8	2.4	28.4	29.0	29.5	30.2	31.6	33.1	34.0	34.6	36.0
18-19 YEARS.....	52	404	30.7	3.0	28.0	28.3	28.4	28.7	30.1	31.2	32.9	34.1	35.2
20-24 YEARS.....	80	866	31.3	2.2	28.1	28.9	29.5	30.0	31.0	32.3	33.4	33.5	34.9
25-34 YEARS.....	119	1,232	31.7	2.5	28.4	28.6	29.5	30.2	31.6	32.8	33.6	34.1	36.0
35-44 YEARS.....	87	1,005	32.1	2.2	29.0	29.0	30.0	30.3	32.0	33.6	34.0	34.5	36.0
45-54 YEARS.....	130	1,057	31.9	2.1	28.8	29.6	29.8	30.5	31.8	33.5	34.5	34.6	35.6
55-64 YEARS.....	85	703	32.4	2.6	28.9	29.5	29.7	30.4	32.0	34.4	34.8	35.4	37.0
65-74 YEARS.....	294	486	32.0	1.9	29.2	29.5	30.0	30.6	32.0	33.2	33.8	34.2	34.6

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 24. NUMBER OF FEMALES AGES 18-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR BITROCHANTERIC BREADTH, BY RACE AND AGE: UNITED STATES, 1971-74

RACE AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>BITROCHANTERIC BREADTH IN CENTIMETERS</b>													
<b>ALL RACES<sup>1</sup></b>													
18-74 YEARS...	8,410	67,837	32.1	2.2	28.7	29.4	29.9	30.7	32.0	33.5	34.3	35.0	36.0
18-19 YEARS.....	280	3,679	31.1	2.1	27.8	28.6	29.0	29.7	31.0	32.1	32.8	33.4	34.5
20-24 YEARS.....	1,243	9,215	31.4	2.3	28.2	28.8	29.2	29.8	31.3	32.6	33.4	33.9	34.9
25-34 YEARS.....	1,896	13,933	31.9	2.3	28.5	29.4	29.7	30.5	31.7	33.2	34.0	34.7	36.0
35-44 YEARS.....	1,664	11,593	32.4	2.2	28.9	29.8	30.3	30.9	32.2	33.7	34.5	35.2	36.2
45-54 YEARS.....	836	12,163	32.7	2.1	29.4	29.9	30.6	31.2	32.6	33.9	34.8	35.6	36.5
55-64 YEARS.....	669	9,976	32.4	2.1	28.9	30.0	30.3	31.1	32.3	33.7	34.6	35.2	36.0
65-74 YEARS.....	1,822	7,277	32.5	2.1	29.2	29.9	30.4	31.1	32.5	33.7	34.5	35.1	35.8
<b>WHITE</b>													
18-74 YEARS.....	6,757	59,923	32.2	2.2	28.8	29.5	30.0	30.8	32.1	33.5	34.3	35.0	35.9
18-19 YEARS.....	208	3,159	31.1	1.8	28.2	28.9	29.2	30.0	31.1	32.1	33.0	33.4	34.3
20-24 YEARS.....	956	7,972	31.4	2.2	28.4	29.0	29.4	30.0	31.4	32.7	33.4	33.9	34.8
25-34 YEARS.....	1,539	12,161	32.0	2.2	28.6	29.5	29.9	30.5	31.8	33.2	34.1	34.7	36.0
35-44 YEARS.....	1,302	10,111	32.4	2.2	29.1	29.9	30.4	31.0	32.3	33.7	34.5	35.2	36.2
45-54 YEARS.....	705	10,879	32.6	2.1	29.4	29.9	30.6	31.3	32.6	33.9	34.7	35.5	36.3
55-64 YEARS.....	551	9,037	32.4	2.1	28.9	30.0	30.4	31.1	32.3	33.7	34.6	35.2	35.7
65-74 YEARS.....	1,496	6,603	32.5	2.0	29.4	30.0	30.5	31.2	32.5	33.8	34.5	35.0	35.8
<b>BLACK</b>													
18-74 YEARS.....	1,557	7,302	31.9	2.7	28.1	28.7	29.2	30.1	31.7	33.3	34.2	35.3	36.8
18-19 YEARS.....	70	504	30.8	3.3	27.2	27.5	28.0	29.0	30.4	32.0	32.7	34.0	37.7
20-24 YEARS.....	259	1,073	30.9	2.7	27.7	28.2	28.4	29.0	30.6	32.3	33.4	33.8	35.8
25-34 YEARS.....	335	1,646	31.5	2.6	28.1	28.5	29.1	29.7	31.2	32.6	33.7	34.7	36.1
35-44 YEARS.....	334	1,318	32.3	2.4	28.7	29.4	29.9	30.7	32.2	33.8	34.6	35.5	36.6
45-54 YEARS.....	126	1,237	32.8	2.6	29.2	30.3	30.7	31.0	32.7	33.9	35.3	36.5	38.0
55-64 YEARS.....	115	871	32.5	2.5	28.6	29.5	30.0	31.2	32.3	33.5	34.6	35.3	38.7
65-74 YEARS.....	318	652	32.1	2.6	28.5	29.2	29.5	30.6	31.9	33.4	34.6	35.4	36.1

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 25. NUMBER OF CHILDREN AGES 1-7 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR CHEST CIRCUMFERENCE, BY SEX, RACE, AND SINGLE YEAR OF AGE: UNITED STATES, 1971-74

SEX, RACE, AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>MALE</b>													
<b>ALL RACES<sup>1</sup></b>													
CHEST CIRCUMFERENCE IN CENTIMETERS													
1 YEAR.....	286	1,693	48.5	2.6	44.8	45.2	45.8	47.0	48.2	49.9	50.8	51.9	52.8
2 YEARS.....	298	1,747	50.4	2.6	46.6	47.2	47.6	48.5	50.2	52.0	53.1	53.7	54.6
3 YEARS.....	308	1,807	52.4	2.8	48.3	49.1	49.7	50.6	52.1	53.8	55.0	55.5	56.5
4 YEARS.....	304	1,815	54.1	2.8	49.9	50.6	51.5	52.4	54.0	56.2	57.3	58.0	58.8
5 YEARS.....	273	1,563	56.5	3.5	51.3	52.3	53.2	54.2	56.2	58.5	59.7	60.4	62.3
6 YEARS.....	179	1,673	57.6	3.8	52.1	53.3	53.5	54.5	57.6	59.3	61.2	62.9	64.1
7 YEARS.....	164	1,979	60.4	4.2	53.4	55.7	56.6	57.5	59.8	63.3	64.6	65.5	66.5
<b>WHITE</b>													
1 YEAR.....	211	1,402	48.7	2.3	45.0	45.5	46.3	47.2	48.6	50.0	50.8	51.9	52.6
2 YEARS.....	217	1,461	50.3	2.4	46.8	47.2	47.6	48.5	50.2	51.8	52.6	53.7	54.3
3 YEARS.....	226	1,536	52.5	2.8	48.5	49.1	49.7	50.8	52.2	54.0	55.0	55.5	56.6
4 YEARS.....	229	1,547	54.2	2.8	49.6	50.6	51.6	52.4	54.1	56.3	57.3	58.1	58.8
5 YEARS.....	207	1,319	56.6	3.5	51.3	52.3	53.3	54.2	56.4	58.6	59.7	61.3	62.4
6 YEARS.....	126	1,343	57.6	3.8	52.3	53.3	53.6	54.6	57.6	59.3	61.2	62.9	64.0
7 YEARS.....	125	1,718	60.6	4.2	55.1	56.0	57.0	57.6	60.2	63.6	65.1	65.6	67.5
<b>BLACK</b>													
1 YEAR.....	72	280	47.6	3.3	43.4	44.6	44.8	45.5	47.2	48.5	49.6	51.2	52.8
2 YEARS.....	77	267	50.7	3.4	46.6	47.0	47.8	48.6	49.8	53.0	53.5	58.1	58.1
3 YEARS.....	72	212	51.7	3.0	47.4	49.2	49.5	50.1	51.1	52.6	54.2	55.4	56.4
4 YEARS.....	74	260	53.6	2.6	50.0	50.3	50.9	51.6	53.8	55.3	56.5	57.2	58.0
5 YEARS.....	64	226	56.0	3.4	51.2	52.3	53.0	53.5	56.0	57.5	60.0	60.0	60.4
6 YEARS.....	52	321	57.3	3.9	51.8	53.5	53.5	54.4	56.2	59.8	60.5	63.2	66.0
7 YEARS.....	38	253	58.9	4.2	50.8	52.4	53.5	56.2	58.7	62.8	64.0	64.1	64.4
<b>FEMALE</b>													
<b>ALL RACES<sup>1</sup></b>													
1 YEAR.....	267	1,620	47.2	2.6	43.0	43.8	44.4	45.5	47.2	48.8	50.1	50.4	51.1
2 YEARS.....	272	1,708	49.2	2.6	44.7	46.1	46.9	47.7	49.1	50.7	51.6	52.3	52.9
3 YEARS.....	292	1,701	51.2	2.5	47.7	48.3	48.9	49.5	51.0	52.5	53.9	54.2	55.9
4 YEARS.....	281	1,599	52.4	2.7	48.5	49.1	49.8	50.6	52.4	54.0	55.3	55.8	57.4
5 YEARS.....	314	1,695	54.7	3.8	49.4	50.7	51.4	52.1	54.3	56.2	57.7	59.3	62.3
6 YEARS.....	176	1,787	56.2	3.9	51.0	51.8	52.3	53.8	55.9	58.2	60.1	61.2	61.6
7 YEARS.....	169	1,754	58.6	4.1	52.6	53.7	54.1	55.7	58.0	60.8	62.0	63.4	65.6
<b>WHITE</b>													
1 YEAR.....	189	1,328	47.2	2.6	43.0	44.0	44.4	45.5	47.2	48.8	50.2	50.5	51.1
2 YEARS.....	203	1,434	49.3	2.6	45.5	46.2	47.2	47.7	49.1	50.8	51.6	52.3	52.9
3 YEARS.....	211	1,438	51.2	2.5	47.7	48.3	48.8	49.7	51.0	52.5	53.9	54.2	55.9
4 YEARS.....	204	1,339	52.5	2.6	48.5	49.3	50.1	50.8	52.5	54.0	55.1	55.7	57.1
5 YEARS.....	224	1,416	54.9	3.9	50.0	50.9	51.5	52.5	54.4	56.3	57.9	59.4	63.8
6 YEARS.....	125	1,445	56.2	3.8	51.1	51.9	52.4	53.8	55.9	58.2	60.1	61.4	61.6
7 YEARS.....	122	1,507	58.7	4.2	52.6	54.0	54.1	56.2	58.6	60.8	62.0	63.4	65.9
<b>BLACK</b>													
1 YEAR.....	73	257	47.0	2.9	43.3	43.3	44.4	45.1	47.4	48.2	50.1	50.2	53.5
2 YEARS.....	66	261	48.4	2.9	43.9	44.7	45.4	46.7	48.5	50.5	51.7	52.0	52.3
3 YEARS.....	78	245	50.6	2.2	47.5	48.0	48.9	49.1	50.3	51.1	53.2	53.9	55.0
4 YEARS.....	73	246	52.1	3.0	48.3	48.8	49.1	49.8	51.4	54.5	55.7	57.4	57.8
5 YEARS.....	88	265	53.5	3.6	48.9	49.0	50.1	51.2	53.4	55.3	56.5	57.1	60.7
6 YEARS.....	50	336	56.1	4.1	50.1	51.7	51.9	53.7	55.9	58.2	59.2	60.5	61.5
7 YEARS.....	46	241	57.6	3.7	52.6	52.6	54.2	54.9	57.1	61.1	61.9	63.5	63.7

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 26. NUMBER OF ADULTS AGES 25-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR CHEST CIRCUMFERENCE AT FULL EXPIRATION, BY SEX, RACE, AND AGE: UNITED STATES, 1971-75

SEX, RACE, AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>MALE</b>													
<b>ALL RACES<sup>1</sup></b>													
25-74 YEARS.....	3,139	50,054	93.6	8.0	81.2	83.9	85.4	88.0	93.2	98.7	102.0	104.0	106.5
25-34 YEARS.....	669	13,582	91.9	8.3	80.1	82.4	84.0	86.1	91.2	97.0	100.4	102.8	106.9
35-44 YEARS.....	524	10,667	94.1	7.5	82.0	84.6	86.3	89.0	93.6	99.4	102.4	103.6	105.4
45-54 YEARS.....	737	11,114	95.1	7.9	82.6	85.1	86.8	89.4	95.0	100.5	103.6	105.0	107.4
55-64 YEARS.....	621	9,131	94.2	8.2	82.0	84.5	86.3	88.3	94.2	99.1	101.9	104.0	106.8
65-74 YEARS.....	588	5,559	93.0	7.2	81.2	83.6	85.6	88.6	92.9	97.3	99.9	102.1	105.1
<b>WHITE</b>													
25-74 YEARS.....	2,719	44,862	93.8	7.9	81.5	84.1	85.9	88.2	93.3	98.8	102.1	104.1	106.5
25-34 YEARS.....	585	12,073	92.2	8.3	80.3	82.6	84.1	86.5	91.8	97.2	100.6	103.2	107.0
35-44 YEARS.....	466	9,523	94.1	7.3	82.0	85.1	86.5	89.2	93.6	99.3	102.4	103.6	105.3
45-54 YEARS.....	635	9,963	95.3	7.8	82.6	85.5	87.0	90.0	95.2	100.7	103.8	104.9	107.3
55-64 YEARS.....	541	8,283	94.3	8.0	82.7	85.1	86.5	88.3	94.4	99.1	101.6	103.9	106.2
65-74 YEARS.....	492	5,020	93.1	7.0	82.1	84.1	86.2	88.8	92.8	97.1	99.6	101.8	104.4
<b>BLACK</b>													
25-74 YEARS.....	383	4,601	93.0	8.8	80.6	82.3	84.1	86.2	92.8	98.7	102.0	104.6	106.9
25-34 YEARS.....	71	1,271	90.6	7.8	80.2	82.1	83.1	85.2	88.6	95.9	98.1	102.0	106.1
35-44 YEARS.....	51	985	94.6	8.2	81.5	82.6	84.6	87.1	95.1	100.9	102.0	103.1	105.5
45-54 YEARS.....	97	1,089	93.3	8.6	82.1	83.4	84.6	86.6	93.6	98.7	102.1	105.8	110.0
55-64 YEARS.....	74	761	94.3	10.3	80.3	82.3	84.1	88.8	92.7	100.6	103.5	104.1	118.4
65-74 YEARS.....	90	495	93.2	9.1	78.5	81.3	81.7	84.2	95.1	100.0	103.1	105.1	105.9
<b>FEMALE</b>													
<b>ALL RACES<sup>1</sup></b>													
25-74 YEARS.....	3,703	55,335	83.0	8.8	71.4	73.1	74.5	76.5	81.6	88.1	91.8	94.6	99.3
25-34 YEARS.....	879	14,375	79.6	8.0	70.2	71.4	72.4	74.1	78.1	83.5	88.0	91.0	95.6
35-44 YEARS.....	685	11,423	82.3	8.7	71.3	73.2	74.3	76.5	80.6	86.7	91.0	93.6	99.8
45-54 YEARS.....	857	12,088	84.0	8.7	72.6	74.5	75.7	78.1	83.1	88.3	92.1	95.1	98.9
55-64 YEARS.....	658	10,102	85.7	8.8	73.1	75.2	76.5	79.5	84.6	91.0	94.6	97.3	102.3
65-74 YEARS.....	624	7,347	85.5	8.1	73.5	75.5	77.0	79.4	84.6	90.7	93.1	96.0	101.7
<b>WHITE</b>													
25-74 YEARS.....	3,190	48,965	82.6	8.4	71.5	73.1	74.4	76.4	81.3	87.5	91.2	94.0	98.5
25-34 YEARS.....	765	12,505	79.2	7.7	70.2	71.4	72.3	74.0	77.6	83.0	87.0	89.6	95.1
35-44 YEARS.....	576	9,885	81.7	8.3	71.3	73.1	74.3	76.2	79.9	85.6	89.3	93.1	98.6
45-54 YEARS.....	746	10,791	83.5	8.1	72.6	74.4	75.5	77.8	82.3	88.0	91.5	94.2	97.6
55-64 YEARS.....	571	9,119	85.1	8.1	73.1	75.1	76.5	79.2	84.2	90.5	94.0	96.1	100.6
65-74 YEARS.....	532	6,665	85.6	8.0	73.8	75.6	77.1	79.4	84.9	90.8	93.1	95.8	100.4
<b>BLACK</b>													
25-74 YEARS.....	478	5,864	86.6	11.0	72.1	74.2	75.6	78.6	84.7	92.1	97.1	101.3	105.5
25-34 YEARS.....	101	1,685	82.1	9.5	70.5	71.1	72.8	75.5	79.6	88.1	92.0	94.0	101.7
35-44 YEARS.....	97	1,392	87.1	9.4	74.1	76.5	77.0	80.7	86.3	92.0	96.5	99.8	101.5
45-54 YEARS.....	105	1,221	89.3	11.7	74.2	77.8	78.4	83.0	87.5	95.2	98.6	105.0	107.6
55-64 YEARS.....	84	899	91.4	12.6	73.2	75.3	77.6	83.3	89.8	98.2	105.4	112.0	114.6
65-74 YEARS.....	91	667	85.7	9.1	73.1	74.6	75.4	80.2	84.0	89.6	94.8	101.8	103.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 27. NUMBER OF ADULTS AGES 25-74 YEARS IN SAMPLE, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR CHEST CIRCUMFERENCE AT FULL INSPIRATION, BY SEX, RACE, AND AGE: UNITED STATES, 1971-75

SEX, RACE, AND AGE	NUMBER IN SAMPLE	ESTIMATED POPULATION IN THOUSANDS	MEAN	STANDARD DEVIATION	PERCENTILE								
					5TH	10TH	15TH	25TH	50TH	75TH	85TH	90TH	95TH
<b>MALE</b>													
<b>ALL RACES<sup>1</sup></b>													
25-74 YEARS.....	3,140	50,092	99.8	7.6	87.9	90.4	92.2	94.5	99.6	104.8	107.5	109.5	112.0
25-34 YEARS.....	669	13,582	98.9	7.7	87.5	89.6	91.1	93.6	98.4	103.2	106.6	109.6	113.2
35-44 YEARS.....	525	10,706	100.4	7.1	89.0	91.2	93.4	95.5	100.1	105.0	108.0	109.4	111.2
45-54 YEARS.....	737	11,114	100.9	7.5	89.2	91.0	92.6	95.5	101.1	106.2	108.7	110.2	112.4
55-64 YEARS.....	621	9,131	100.1	8.0	87.4	91.1	92.3	94.2	100.1	105.1	107.6	109.6	112.1
65-74 YEARS.....	588	5,559	98.1	6.9	87.0	88.8	91.5	93.7	98.2	102.3	105.0	107.0	109.9
<b>WHITE</b>													
25-74 YEARS.....	2,719	44,862	100.1	7.5	88.7	91.1	92.6	95.0	99.8	105.0	107.6	109.6	112.1
25-34 YEARS.....	585	12,073	99.3	7.7	88.0	90.0	91.9	94.2	98.6	103.5	106.7	109.8	113.4
35-44 YEARS.....	466	9,523	100.6	7.0	89.9	92.0	93.9	95.6	100.4	105.3	108.1	109.5	111.4
45-54 YEARS.....	635	9,963	101.3	7.4	89.3	91.2	93.5	96.1	101.3	106.5	108.7	110.2	112.2
55-64 YEARS.....	541	8,283	100.2	7.8	87.8	91.5	92.5	94.5	100.1	105.0	107.6	109.6	112.0
65-74 YEARS.....	492	5,020	98.2	6.7	87.1	89.6	92.1	93.8	98.3	102.3	104.6	106.5	109.7
<b>BLACK</b>													
25-74 YEARS.....	384	4,639	98.2	8.3	86.1	88.9	90.1	92.1	97.5	104.1	106.7	109.1	111.7
25-34 YEARS.....	71	1,271	96.6	7.3	87.0	89.8	90.4	91.5	94.0	101.3	105.1	106.6	110.3
35-44 YEARS.....	52	1,024	99.5	7.3	88.6	89.0	90.2	93.5	99.1	104.2	105.1	109.1	109.6
45-54 YEARS.....	97	1,089	98.1	8.3	87.2	89.6	90.5	91.6	98.0	103.6	105.9	111.0	114.8
55-64 YEARS.....	74	761	99.6	10.1	85.1	87.0	89.9	93.1	97.4	106.7	108.1	108.2	123.1
65-74 YEARS.....	90	495	97.7	9.0	83.2	85.4	86.1	88.8	98.3	105.0	107.5	109.9	111.7
<b>FEMALE</b>													
<b>ALL RACES<sup>1</sup></b>													
25-74 YEARS.....	3,706	55,398	88.1	8.3	77.1	78.8	80.3	82.1	87.0	92.6	96.2	98.9	103.3
25-34 YEARS.....	881	14,416	85.4	7.8	76.0	77.2	78.3	80.4	83.6	89.0	92.9	95.7	101.0
35-44 YEARS.....	685	11,423	87.7	8.3	77.0	78.6	80.6	82.3	86.2	91.9	95.6	98.3	103.2
45-54 YEARS.....	857	12,088	89.0	8.1	78.0	79.5	81.0	83.2	88.2	93.4	97.0	99.6	102.5
55-64 YEARS.....	658	10,102	90.2	8.3	78.2	80.3	82.0	85.0	89.0	95.1	98.7	101.1	105.4
65-74 YEARS.....	625	7,369	89.8	7.7	78.1	80.5	81.5	84.0	89.4	94.6	97.5	99.6	104.0
<b>WHITE</b>													
25-74 YEARS.....	3,193	49,028	87.8	7.9	77.1	78.9	80.3	82.1	86.7	92.4	95.7	98.4	102.3
25-34 YEARS.....	767	12,547	85.2	7.6	76.0	77.2	78.3	80.3	83.6	88.6	92.3	95.0	100.4
35-44 YEARS.....	576	9,885	87.3	8.1	77.1	79.0	80.6	82.1	85.6	90.6	94.5	97.5	102.3
45-54 YEARS.....	746	10,791	88.6	7.6	78.0	79.4	80.6	83.1	87.9	93.0	95.8	98.4	101.8
55-64 YEARS.....	571	9,119	89.7	7.7	78.2	80.5	82.0	84.6	88.7	94.4	98.3	100.4	103.8
65-74 YEARS.....	533	6,686	89.9	7.5	78.6	80.9	81.8	84.0	89.6	94.8	97.4	99.4	103.6
<b>BLACK</b>													
25-74 YEARS.....	478	5,864	90.8	10.4	77.0	78.6	81.0	83.5	88.8	95.8	101.4	104.5	109.3
25-34 YEARS.....	101	1,685	86.8	9.3	75.1	77.0	78.1	81.1	85.4	92.1	95.5	98.3	108.5
35-44 YEARS.....	97	1,392	91.6	8.9	78.6	80.8	84.0	86.2	91.0	95.8	101.3	103.1	108.0
45-54 YEARS.....	105	1,221	93.4	10.9	80.0	83.1	83.4	87.0	91.6	100.1	103.0	107.9	109.8
55-64 YEARS.....	84	899	94.9	11.8	78.1	79.1	81.9	88.2	93.0	102.0	107.8	114.3	115.5
65-74 YEARS.....	91	667	89.1	9.1	75.6	77.2	80.0	83.6	87.4	94.5	98.8	104.0	105.6

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 28. NUMBER OF PERSONS AGE 1-20 YEARS IN SAMPLES, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR UPPER ARM GIRTH, BY SEX AND AGE: UNITED STATES, 1963-65, 1966-70, AND 1971-74

SEX AND AGE	NUMBER IN SAMPLES	ESTIMATED POPULATION IN THOUSANDS <sup>1</sup>	MEAN	STANDARD DEVIATION	PERCENTILE						
					5TH	10TH	25TH	50TH	75TH	90TH	95TH
<b>MALE</b>											
<b>UPPER ARM GIRTH IN CENTIMETERS</b>											
1.00-1.24 YEARS.....	44	236	15.7	1.0	14.3	14.7	14.8	15.6	16.8	17.2	17.7
1.25-1.74 YEARS.....	172	995	16.1	1.4	14.0	14.3	15.2	15.9	17.0	17.8	19.3
1.75-2.24 YEARS.....	147	884	16.0	1.3	14.2	14.7	15.1	15.7	17.0	17.6	18.6
2.25-2.74 YEARS.....	157	972	16.4	1.8	14.1	14.3	15.4	16.2	17.2	18.3	18.8
2.75-3.24 YEARS.....	147	807	16.4	1.4	14.8	15.2	15.6	16.3	17.2	17.6	18.2
3.25-3.74 YEARS.....	146	882	16.8	1.8	14.9	15.2	15.9	16.5	17.4	18.2	18.8
3.75-4.24 YEARS.....	152	867	17.1	1.3	15.1	15.5	16.4	17.0	17.8	18.6	19.0
4.25-4.74 YEARS.....	162	919	17.0	1.4	14.5	15.3	16.1	17.1	18.0	18.8	19.2
4.75-5.24 YEARS.....	135	856	17.4	1.8	15.2	15.4	16.2	17.5	18.3	19.0	19.4
5.25-5.74 YEARS.....	146	864	17.8	1.8	15.6	16.3	16.8	17.5	18.4	19.5	20.2
5.75-6.24 YEARS.....	254	865	17.8	1.8	15.4	16.0	16.6	17.7	18.7	19.6	20.8
6.25-6.74 YEARS.....	375	976	17.7	1.8	15.3	15.9	16.6	17.4	18.4	19.8	21.0
6.75-7.24 YEARS.....	384	937	18.2	1.9	15.6	16.0	16.9	18.0	19.2	20.5	21.8
7.25-7.74 YEARS.....	411	1,055	18.5	2.2	15.7	16.1	17.3	18.0	19.3	21.5	22.9
7.75-8.24 YEARS.....	375	991	18.8	2.0	16.0	16.3	17.5	18.6	19.8	21.5	22.5
8.25-8.74 YEARS.....	381	939	19.0	1.9	16.8	17.1	17.6	18.7	20.0	21.4	22.6
8.75-9.24 YEARS.....	386	983	19.5	2.4	16.2	16.8	18.1	19.1	20.4	22.8	25.2
9.25-9.74 YEARS.....	392	993	20.2	2.9	16.9	17.2	18.3	19.5	21.1	25.0	26.4
9.75-10.24 YEARS.....	393	1,061	20.7	2.7	17.2	18.0	19.0	20.3	22.2	24.5	25.5
10.25-10.74 YEARS.....	386	1,055	21.0	2.7	17.7	18.1	19.1	20.5	22.2	24.7	26.2
10.75-11.24 YEARS.....	373	1,041	21.6	2.7	18.2	18.5	19.6	21.1	23.0	25.1	26.8
11.25-11.74 YEARS.....	387	944	22.1	3.2	18.1	19.0	20.0	21.5	23.6	26.1	28.2
11.75-12.24 YEARS.....	382	997	22.7	3.4	18.6	19.1	20.3	22.0	24.5	27.1	29.3
12.25-12.74 YEARS.....	447	1,078	23.0	2.8	19.2	20.0	21.1	22.5	24.7	26.9	28.2
12.75-13.24 YEARS.....	435	1,140	23.7	3.2	19.7	20.1	21.6	23.1	25.6	27.8	28.9
13.25-13.74 YEARS.....	414	1,041	24.5	3.1	20.0	21.1	22.5	24.1	26.3	28.6	30.1
13.75-14.24 YEARS.....	362	941	25.3	3.3	20.9	21.8	22.9	24.8	27.1	29.8	31.2
14.25-14.74 YEARS.....	412	1,006	26.0	3.5	21.6	22.4	23.6	25.4	28.0	30.5	32.1
14.75-15.24 YEARS.....	411	1,097	26.1	3.3	22.2	22.8	24.0	25.3	28.0	30.4	31.9
15.25-15.74 YEARS.....	394	909	27.0	3.3	22.2	23.1	25.0	26.3	29.0	31.9	33.2
15.75-16.24 YEARS.....	382	1,040	27.4	2.9	23.0	24.2	25.5	27.4	28.8	31.2	32.7
16.25-16.74 YEARS.....	336	867	28.0	3.0	23.6	24.5	25.9	27.6	29.7	32.2	33.8
16.75-17.24 YEARS.....	357	1,042	28.7	3.3	24.4	25.0	26.6	28.3	30.4	32.6	35.5
17.25-17.74 YEARS.....	326	925	28.9	3.1	24.5	25.3	26.6	28.4	31.0	33.6	34.3
17.75-18.24 YEARS.....	199	839	29.6	3.6	25.0	25.7	27.1	28.6	32.0	34.5	36.5
18.25-18.99 YEARS.....	98	1,250	30.6	4.0	25.1	26.5	27.8	30.0	32.4	36.5	38.6
19.00-19.99 YEARS.....	135	2,073	30.3	3.3	25.3	26.5	28.0	29.8	32.2	34.3	37.1
20.00-20.99 YEARS.....	104	1,663	30.7	3.2	26.2	27.1	28.1	30.6	32.6	34.2	35.5
<b>FEMALE</b>											
1.00-1.24 YEARS.....	48	298	15.0	1.2	12.2	13.8	14.4	15.2	15.7	16.4	16.6
1.25-1.74 YEARS.....	148	908	15.6	1.2	14.0	14.2	14.9	15.6	16.2	17.0	17.9
1.75-2.24 YEARS.....	154	866	15.8	1.2	13.6	14.2	14.9	15.9	16.7	17.3	17.8
2.25-2.74 YEARS.....	147	991	16.1	1.3	14.2	14.5	15.2	16.1	16.6	17.8	18.6
2.75-3.24 YEARS.....	110	629	16.5	1.3	14.5	14.8	15.6	16.7	17.2	17.8	18.5
3.25-3.74 YEARS.....	149	903	16.5	1.3	14.3	14.9	15.7	16.5	17.4	18.0	19.0
3.75-4.24 YEARS.....	135	773	16.6	1.4	14.4	15.2	16.0	16.6	17.5	18.4	18.9
4.25-4.74 YEARS.....	145	801	16.8	1.4	14.8	14.8	15.9	16.8	17.7	18.5	19.2
4.75-5.24 YEARS.....	146	833	17.2	1.3	15.2	15.8	16.3	17.1	18.0	18.8	19.5
5.25-5.74 YEARS.....	154	845	17.6	1.9	15.0	15.5	16.5	17.5	18.2	19.4	21.5
5.75-6.24 YEARS.....	243	864	17.7	2.3	15.3	15.6	16.5	17.3	18.3	20.5	22.4
6.25-6.74 YEARS.....	359	998	17.8	1.7	15.2	15.9	16.5	17.6	18.8	20.1	20.9
6.75-7.24 YEARS.....	398	928	18.0	1.9	15.4	15.9	16.9	17.8	19.0	20.5	21.0
7.25-7.74 YEARS.....	376	925	18.4	2.0	15.2	16.1	17.0	18.1	19.5	21.0	22.1
7.75-8.24 YEARS.....	394	997	19.0	2.4	16.1	16.7	17.4	18.4	20.0	21.8	23.5
8.25-8.74 YEARS.....	403	980	19.6	2.5	16.4	17.0	17.8	19.1	20.8	22.5	24.7
8.75-9.24 YEARS.....	377	996	20.2	2.6	17.0	17.4	18.2	19.7	21.8	24.4	25.2
9.25-9.74 YEARS.....	358	894	20.4	2.5	16.9	17.6	18.5	20.2	21.8	23.5	25.3
9.75-10.24 YEARS.....	407	1,082	20.6	2.7	17.0	17.7	18.8	20.1	22.0	24.5	25.7
10.25-10.74 YEARS.....	378	1,036	21.1	2.7	17.1	17.8	19.2	20.8	22.5	25.0	26.1
10.75-11.24 YEARS.....	351	837	21.7	2.9	17.7	18.5	19.6	21.2	23.1	25.3	27.3
11.25-11.74 YEARS.....	321	826	22.1	3.3	17.8	18.3	19.9	21.4	23.8	26.4	27.9
11.75-12.24 YEARS.....	392	1,039	23.0	3.2	18.5	19.2	20.8	22.7	24.7	27.2	29.0
12.25-12.74 YEARS.....	375	987	23.4	3.0	18.9	19.9	21.1	23.0	25.1	27.4	29.0
12.75-13.24 YEARS.....	400	1,025	24.0	3.4	19.1	20.1	21.5	23.5	26.0	29.2	30.5
13.25-13.74 YEARS.....	397	1,080	24.8	3.4	20.2	21.0	22.4	24.2	26.5	29.2	31.3
13.75-14.24 YEARS.....	388	1,042	25.0	3.5	20.1	21.0	22.8	24.1	27.0	30.0	32.2
14.25-14.74 YEARS.....	371	919	25.8	3.8	21.2	21.8	23.3	25.1	27.6	30.9	32.2
14.75-15.24 YEARS.....	362	996	25.5	3.3	20.7	21.6	23.2	24.8	27.4	29.9	32.0
15.25-15.74 YEARS.....	339	1,012	25.9	3.5	21.8	22.0	23.7	25.5	27.9	29.6	32.2
15.75-16.24 YEARS.....	358	984	25.9	3.3	21.7	22.4	23.5	25.4	27.5	30.0	32.0
16.25-16.74 YEARS.....	320	859	26.3	3.8	21.8	22.4	23.6	25.4	28.3	31.5	33.8
16.75-17.24 YEARS.....	377	1,137	26.7	3.6	22.0	22.8	24.4	26.0	28.5	31.9	34.3
17.25-17.74 YEARS.....	299	832	26.5	4.1	22.0	22.4	23.6	25.9	27.9	31.2	35.0
17.75-18.24 YEARS.....	188	854	26.7	3.7	22.5	23.1	24.1	26.4	29.1	31.0	32.4
18.25-18.99 YEARS.....	106	1,665	26.4	3.4	21.6	23.0	24.0	26.0	27.8	30.8	33.0
19.00-19.99 YEARS.....	137	1,606	27.0	3.9	22.1	22.8	24.4	26.3	28.8	32.3	33.5
20.00-20.99 YEARS.....	236	1,859	26.4	3.6	21.7	22.5	24.1	26.0	28.1	31.0	32.1

<sup>1</sup>THOSE CELLS CONTAINING SUBJECTS FROM NHANES I AND NHES II OR NHES III HAVE BEEN CUT IN HALF TO MAINTAIN REPRESENTATIVENESS

TABLE 29. NUMBER OF PERSONS AGES 1-20 YEARS IN SAMPLES, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR TRICEPS SKINFOLD, BY SEX AND AGE: UNITED STATES, 1963-65, 1966-70, AND 1971-74

SEX AND AGE	NUMBER IN SAMPLES	ESTIMATED POPULATION IN THOUSANDS <sup>1</sup>	MEAN	STANDARD DEVIATION	PERCENTILE						
					5TH	10TH	25TH	50TH	75TH	90TH	95TH
<b>MALE</b>					<b>TRICEPS SKINFOLD IN MILLIMETERS</b>						
1.00-1.24 YEARS.....	44	236	10.7	2.9	6.0	6.0	8.5	11.5	12.0	14.0	15.5
1.25-1.74 YEARS.....	172	995	10.4	3.4	6.0	7.0	8.0	10.0	12.5	15.0	16.5
1.75-2.24 YEARS.....	147	884	10.2	2.5	6.5	7.0	8.0	10.0	12.0	14.0	15.0
2.25-2.74 YEARS.....	157	972	10.0	2.6	6.0	7.0	8.0	10.0	12.0	13.5	15.0
2.75-3.24 YEARS.....	147	807	9.9	2.9	6.0	6.5	8.0	10.0	11.5	13.1	15.0
3.25-3.74 YEARS.....	146	882	9.8	2.6	6.5	7.0	8.0	10.0	11.0	13.0	14.0
3.75-4.24 YEARS.....	152	867	9.9	2.8	6.0	7.0	8.0	10.0	12.0	14.0	14.5
4.25-4.74 YEARS.....	162	919	9.2	2.4	6.0	6.0	7.5	9.0	11.0	12.0	13.0
4.75-5.24 YEARS.....	135	856	9.4	2.7	5.0	7.0	7.5	9.0	11.0	12.0	14.0
5.25-5.74 YEARS.....	146	864	9.3	3.5	5.0	6.0	7.0	8.5	10.0	14.0	15.0
5.75-6.24 YEARS.....	254	865	8.7	2.9	5.0	6.0	7.0	8.0	10.0	12.0	13.0
6.25-6.74 YEARS.....	375	976	8.3	2.7	5.0	5.5	6.5	8.0	9.5	12.0	13.0
6.75-7.24 YEARS.....	384	937	8.5	3.3	4.0	5.0	6.5	8.0	10.0	13.0	15.5
7.25-7.74 YEARS.....	411	1,055	8.6	3.5	5.0	5.0	6.0	8.0	10.0	12.0	16.0
7.75-8.24 YEARS.....	375	991	8.9	3.5	5.0	5.5	6.5	8.0	10.0	13.0	16.0
8.25-8.74 YEARS.....	381	939	8.9	3.4	5.0	6.0	6.5	8.0	10.0	13.0	17.0
8.75-9.24 YEARS.....	386	983	9.4	4.2	4.5	5.0	7.0	8.0	11.0	15.0	18.0
9.25-9.74 YEARS.....	392	993	10.3	4.9	5.0	6.0	7.0	9.0	12.0	17.0	19.0
9.75-10.24 YEARS.....	393	1,061	10.5	4.6	5.5	6.0	7.0	9.0	13.0	17.0	19.0
10.25-10.74 YEARS.....	386	1,055	10.3	4.2	5.5	6.0	7.0	10.0	12.0	15.5	19.0
10.75-11.24 YEARS.....	373	1,041	11.0	5.0	5.0	6.0	8.0	9.5	14.0	19.0	21.0
11.25-11.74 YEARS.....	387	944	11.6	6.1	5.0	6.0	7.0	10.0	14.0	20.0	24.5
11.75-12.24 YEARS.....	382	997	11.8	6.6	5.0	6.0	7.0	9.5	14.0	21.5	26.0
12.25-12.74 YEARS.....	447	1,078	11.1	5.8	5.0	6.0	7.0	10.0	13.0	18.5	24.0
12.75-13.24 YEARS.....	435	1,140	11.2	6.2	4.5	5.0	6.5	10.0	13.5	19.0	25.5
13.25-13.74 YEARS.....	414	1,041	10.7	6.0	4.5	5.0	7.0	9.0	12.5	22.0	24.0
13.75-14.24 YEARS.....	362	941	10.5	6.0	4.0	5.0	6.5	8.5	13.0	19.0	22.0
14.25-14.74 YEARS.....	412	1,006	10.0	6.4	4.0	4.5	6.0	8.0	11.5	18.0	21.0
14.75-15.24 YEARS.....	411	1,097	10.0	6.0	4.0	5.0	6.0	8.0	11.5	19.0	24.0
15.25-15.74 YEARS.....	394	909	9.3	5.4	4.0	4.5	6.0	7.5	11.5	17.0	21.0
15.75-16.24 YEARS.....	382	1,040	9.0	5.1	4.0	4.5	5.5	7.5	10.5	17.0	20.0
16.25-16.74 YEARS.....	336	867	9.3	4.9	4.0	5.0	6.0	8.0	11.5	16.0	22.0
16.75-17.24 YEARS.....	357	1,042	9.6	5.9	4.0	4.5	5.5	8.0	12.0	15.0	22.0
17.25-17.74 YEARS.....	326	925	9.1	5.1	4.0	5.0	6.0	7.5	11.0	15.0	19.0
17.75-18.24 YEARS.....	199	859	9.6	5.6	4.5	5.0	6.0	7.5	12.0	16.5	23.2
18.25-18.99 YEARS.....	98	1,250	11.1	6.9	4.0	4.5	6.5	9.0	13.0	21.0	29.0
19.00-19.99 YEARS.....	135	2,073	10.6	5.5	5.0	5.1	6.5	8.0	14.5	18.0	21.0
20.00-20.99 YEARS.....	104	1,663	10.8	6.1	3.0	4.0	6.0	10.0	15.0	21.0	22.5
<b>FEMALE</b>											
1.00-1.24 YEARS.....	48	298	10.0	2.8	6.0	6.5	7.0	10.0	11.0	14.0	16.0
1.25-1.74 YEARS.....	148	908	10.3	2.7	6.0	6.5	8.0	10.0	12.0	13.5	15.0
1.75-2.24 YEARS.....	154	866	10.4	2.7	6.0	7.0	8.5	10.0	12.0	14.5	15.0
2.25-2.74 YEARS.....	147	991	10.5	2.5	7.0	7.5	9.0	10.0	12.0	14.0	15.5
2.75-3.24 YEARS.....	110	629	11.1	2.4	7.5	8.0	9.0	11.0	13.0	14.0	14.9
3.25-3.74 YEARS.....	149	903	10.7	2.7	6.0	7.0	9.0	11.0	12.5	14.0	15.0
3.75-4.24 YEARS.....	135	773	10.6	3.0	6.0	7.0	8.5	11.0	12.0	14.0	15.5
4.25-4.74 YEARS.....	145	801	10.5	2.8	7.0	7.0	8.0	10.5	12.0	14.5	16.0
4.75-5.24 YEARS.....	146	833	10.5	2.6	7.0	7.5	8.5	10.0	12.0	14.0	15.0
5.25-5.74 YEARS.....	154	845	10.6	3.5	6.0	7.0	8.0	10.0	12.0	15.0	17.5
5.75-6.24 YEARS.....	243	864	10.5	4.2	5.0	6.0	8.0	10.0	12.0	14.5	19.0
6.25-6.74 YEARS.....	359	998	9.8	3.1	5.5	6.5	8.0	9.0	12.0	13.0	16.0
6.75-7.24 YEARS.....	398	928	10.1	3.5	6.0	6.0	7.0	10.0	12.0	15.0	16.0
7.25-7.74 YEARS.....	376	925	10.6	3.7	5.0	6.5	8.0	10.0	12.0	16.0	18.0
7.75-8.24 YEARS.....	394	997	11.2	4.3	6.0	7.0	8.0	11.0	13.0	16.0	19.0
8.25-8.74 YEARS.....	403	980	11.6	4.4	6.0	7.0	8.0	10.5	13.5	18.0	20.0
8.75-9.24 YEARS.....	377	996	12.9	5.1	6.0	8.0	9.0	11.5	16.0	20.0	24.0
9.25-9.74 YEARS.....	358	894	12.4	4.7	6.5	7.0	8.5	12.0	15.0	19.0	22.0
9.75-10.24 YEARS.....	407	1,082	12.5	4.7	7.0	7.0	9.0	12.0	15.0	19.5	22.0
10.25-10.74 YEARS.....	378	1,036	13.2	5.3	6.5	7.0	9.5	12.0	16.0	22.0	24.0
10.75-11.24 YEARS.....	351	837	13.5	5.7	7.0	8.0	9.0	12.0	16.0	20.0	26.0
11.25-11.74 YEARS.....	321	826	13.0	5.7	6.0	7.0	9.0	12.0	15.5	22.0	25.0
11.75-12.24 YEARS.....	392	1,039	14.1	5.8	7.0	7.5	10.0	13.0	17.0	22.0	26.0
12.25-12.74 YEARS.....	375	987	13.6	5.8	6.0	7.5	9.5	12.0	17.0	22.0	24.5
12.75-13.24 YEARS.....	400	1,025	14.1	6.0	7.0	7.5	10.0	12.5	17.0	23.5	25.0
13.25-13.74 YEARS.....	397	1,080	15.0	6.5	6.5	7.5	10.0	14.0	18.5	24.5	26.0
13.75-14.24 YEARS.....	388	1,042	15.7	7.0	7.5	8.5	10.5	13.5	20.0	25.0	28.5
14.25-14.74 YEARS.....	371	919	16.6	7.2	7.5	9.0	11.0	15.0	20.5	25.5	32.0
14.75-15.24 YEARS.....	362	996	16.0	6.7	7.0	8.5	11.0	15.0	20.3	26.0	28.5
15.25-15.74 YEARS.....	339	1,012	16.9	6.7	8.0	10.0	12.5	16.0	20.0	25.0	28.0
15.75-16.24 YEARS.....	358	984	16.6	6.8	7.5	9.5	12.0	15.0	20.0	25.0	31.5
16.25-16.74 YEARS.....	320	859	17.1	6.7	8.0	9.5	12.0	16.0	22.0	25.5	29.0
16.75-17.24 YEARS.....	377	1,137	18.6	7.3	9.0	10.0	14.0	17.0	22.0	29.0	34.0
17.25-17.74 YEARS.....	299	832	17.6	7.6	9.0	10.0	12.5	16.0	21.0	26.5	30.5
17.75-18.24 YEARS.....	188	854	18.2	6.6	9.0	11.5	13.0	17.0	22.5	26.0	29.5
18.25-18.99 YEARS.....	106	1,665	17.7	5.2	9.5	12.0	14.0	17.0	21.0	24.0	26.0
19.00-19.99 YEARS.....	137	1,606	19.3	8.3	8.0	9.0	14.0	18.0	24.0	32.0	36.0
20.00-20.99 YEARS.....	236	1,859	18.4	6.6	10.0	11.5	13.0	18.0	22.0	27.0	30.5

<sup>1</sup>THOSE CELLS CONTAINING SUBJECTS FROM NHANES I AND NHES II OR NHES III HAVE BEEN CUT IN HALF TO MAINTAIN REPRESENTATIVENESS

TABLE 30. NUMBER OF PERSONS AGES 1-20 YEARS IN SAMPLES, ESTIMATED POPULATION, AND MEANS, STANDARD DEVIATIONS, AND SELECTED PERCENTILES FOR SUBSCAPULAR SKINFOLD, BY SEX AND AGE: UNITED STATES, 1963-65, 1966-70, AND 1971-74

SEX AND AGE	NUMBER IN SAMPLES	ESTIMATED POPULATION IN THOUSANDS <sup>1</sup>	MEAN	STANDARD DEVIATION	PERCENTILE						
					5TH	10TH	25TH	50TH	75TH	90TH	95TH
<b>MALE</b>					<b>SUBSCAPULAR SKINFOLD IN MILLIMETERS</b>						
1.00-1.24 YEARS.....	44	236	6.1	1.6	4.0	4.0	5.0	6.0	7.0	8.0	9.0
1.25-1.74 YEARS.....	172	995	6.4	2.0	4.0	4.0	5.0	6.0	7.5	9.0	10.0
1.75-2.24 YEARS.....	147	884	5.7	1.6	4.0	4.0	4.5	5.5	7.0	8.0	9.0
2.25-2.74 YEARS.....	157	972	5.9	2.3	3.0	4.0	4.5	5.5	7.0	9.5	11.5
2.75-3.24 YEARS.....	147	807	5.3	1.6	3.0	4.0	4.0	5.0	6.0	7.5	9.0
3.25-3.74 YEARS.....	146	882	5.3	2.1	3.5	4.0	4.0	5.0	6.0	7.0	9.0
3.75-4.24 YEARS.....	152	867	5.4	1.8	3.5	4.0	4.0	5.0	6.0	7.0	8.0
4.25-4.74 YEARS.....	162	919	5.0	1.3	3.0	3.5	4.0	5.0	5.5	6.5	7.0
4.75-5.24 YEARS.....	135	856	5.3	2.2	3.0	3.5	4.0	5.0	6.0	7.0	7.5
5.25-5.74 YEARS.....	146	864	5.3	3.2	3.0	3.5	4.0	4.5	6.0	7.0	8.0
5.75-6.24 YEARS.....	254	865	4.9	1.8	3.0	3.5	4.0	4.5	5.0	7.0	7.5
6.25-6.74 YEARS.....	375	976	4.9	1.9	3.0	3.5	4.0	4.5	5.0	7.0	7.5
6.75-7.24 YEARS.....	384	937	5.3	2.6	3.0	3.5	4.0	4.5	6.0	7.0	11.0
7.25-7.74 YEARS.....	411	1,055	5.3	2.6	3.0	3.5	4.0	4.5	6.0	8.0	11.0
7.75-8.24 YEARS.....	375	991	5.5	3.2	3.0	3.5	4.0	4.5	6.0	8.0	12.5
8.25-8.74 YEARS.....	381	939	5.3	2.3	3.0	3.5	4.0	5.0	6.0	7.5	11.0
8.75-9.24 YEARS.....	386	983	5.7	3.1	3.0	4.0	4.0	5.0	6.0	9.0	12.0
9.25-9.74 YEARS.....	392	993	6.7	4.7	3.0	4.0	4.0	5.0	7.0	13.0	14.0
9.75-10.24 YEARS.....	393	1,061	6.7	4.6	3.5	4.0	4.0	5.0	7.0	12.0	15.5
10.25-10.74 YEARS.....	386	1,055	6.4	4.2	3.5	4.0	4.0	5.0	7.0	10.0	14.0
10.75-11.24 YEARS.....	373	1,041	7.0	4.3	3.5	4.0	4.5	5.5	7.0	12.5	16.5
11.25-11.74 YEARS.....	387	944	7.8	5.5	4.0	4.0	4.5	6.0	8.5	15.0	19.0
11.75-12.24 YEARS.....	382	997	7.9	6.3	4.0	4.0	4.5	5.5	8.0	16.5	21.0
12.25-12.74 YEARS.....	447	1,078	7.4	5.4	3.5	4.0	4.5	5.5	8.0	12.5	17.5
12.75-13.24 YEARS.....	435	1,140	7.9	6.0	3.5	4.0	4.5	6.0	8.0	14.0	19.5
13.25-13.74 YEARS.....	414	1,041	8.6	6.6	3.5	4.0	5.0	6.0	8.0	17.0	26.0
13.75-14.24 YEARS.....	362	941	8.4	6.1	4.0	4.5	5.0	6.0	9.0	16.0	22.0
14.25-14.74 YEARS.....	412	1,006	8.6	6.4	4.0	4.0	5.0	6.5	8.5	16.0	23.0
14.75-15.24 YEARS.....	411	1,097	8.6	6.5	4.0	5.0	5.5	7.0	9.0	15.0	21.0
15.25-15.74 YEARS.....	394	909	8.8	5.6	4.0	5.0	5.5	7.0	10.0	15.0	22.0
15.75-16.24 YEARS.....	382	1,040	8.7	5.5	4.5	5.0	6.0	7.0	9.0	14.0	17.5
16.25-16.74 YEARS.....	336	867	8.9	4.5	5.0	5.0	6.0	7.5	10.0	15.5	19.0
16.75-17.24 YEARS.....	357	1,042	9.6	6.3	5.0	5.0	6.5	7.5	10.0	15.0	22.0
17.25-17.74 YEARS.....	326	925	9.4	5.3	4.5	5.5	6.5	8.0	10.0	16.0	19.0
17.75-18.24 YEARS.....	199	839	10.7	6.5	5.0	6.0	7.0	8.0	12.0	20.0	28.5
18.25-18.99 YEARS.....	98	1,250	11.8	6.9	5.5	6.0	7.5	9.5	13.0	24.0	28.0
19.00-19.99 YEARS.....	135	2,073	12.4	7.1	6.0	7.0	8.0	10.0	13.0	23.0	30.0
20.00-20.99 YEARS.....	104	1,663	12.3	7.1	6.0	6.0	7.5	10.0	13.0	24.0	26.5
<b>FEMALE</b>											
1.00-1.24 YEARS.....	48	298	6.2	1.9	4.0	4.0	4.5	5.5	8.0	9.0	9.5
1.25-1.74 YEARS.....	148	908	6.3	1.9	4.0	4.0	5.0	6.0	8.0	9.0	9.0
1.75-2.24 YEARS.....	154	866	6.2	2.2	3.0	4.0	5.0	6.0	7.5	8.5	10.5
2.25-2.74 YEARS.....	147	991	6.1	2.2	4.0	4.0	4.5	6.0	7.0	9.0	10.0
2.75-3.24 YEARS.....	110	629	6.0	2.2	4.0	4.0	5.0	5.5	6.5	8.0	9.0
3.25-3.74 YEARS.....	149	903	5.7	2.0	4.0	4.0	4.5	5.0	6.5	7.5	9.0
3.75-4.24 YEARS.....	135	773	5.8	2.0	3.0	4.0	4.5	5.5	6.5	8.0	9.0
4.25-4.74 YEARS.....	145	801	5.4	1.6	3.5	4.0	4.5	5.0	6.0	8.0	9.0
4.75-5.24 YEARS.....	146	833	5.8	2.1	3.5	4.0	4.5	5.0	6.5	8.0	9.0
5.25-5.74 YEARS.....	154	845	6.2	3.5	3.5	4.0	4.0	5.0	6.5	9.5	15.5
5.75-6.24 YEARS.....	243	864	6.0	3.3	3.5	4.0	4.0	5.0	6.0	8.0	12.0
6.25-6.74 YEARS.....	359	998	5.7	2.3	3.0	4.0	4.0	5.0	6.5	8.0	10.0
6.75-7.24 YEARS.....	398	928	6.0	2.9	3.0	4.0	4.0	5.0	7.0	8.5	11.0
7.25-7.74 YEARS.....	376	925	6.1	2.9	3.0	4.0	4.0	5.0	7.0	10.0	11.5
7.75-8.24 YEARS.....	394	997	6.7	4.3	3.5	4.0	4.0	5.0	7.0	11.0	15.0
8.25-8.74 YEARS.....	403	980	6.9	4.1	3.5	4.0	4.5	6.0	8.0	13.0	15.0
8.75-9.24 YEARS.....	377	996	8.1	5.3	4.0	4.0	5.0	6.5	9.0	15.0	21.0
9.25-9.74 YEARS.....	358	894	7.6	4.4	4.0	4.0	5.0	6.0	8.0	14.0	18.0
9.75-10.24 YEARS.....	407	1,082	8.5	5.3	4.0	4.0	5.0	6.5	9.0	18.0	19.0
10.25-10.74 YEARS.....	378	1,036	8.7	5.5	4.0	4.0	5.0	6.5	10.0	17.0	21.0
10.75-11.24 YEARS.....	351	837	9.2	5.6	4.0	4.5	6.0	7.0	11.0	18.0	20.5
11.25-11.74 YEARS.....	321	826	8.9	5.4	4.0	4.0	5.5	7.0	10.0	16.5	21.5
11.75-12.24 YEARS.....	392	1,039	9.8	6.4	4.0	5.0	6.0	8.0	11.5	18.0	25.0
12.25-12.74 YEARS.....	375	987	10.2	6.4	4.5	5.0	6.0	8.0	12.0	20.0	23.5
12.75-13.24 YEARS.....	400	1,025	10.7	6.2	5.0	5.0	6.5	9.0	13.5	19.5	25.0
13.25-13.74 YEARS.....	397	1,080	11.5	6.8	5.0	5.5	7.0	8.5	15.0	22.0	25.5
13.75-14.24 YEARS.....	388	1,042	11.6	7.5	5.0	5.5	6.5	9.0	14.0	20.0	28.0
14.25-14.74 YEARS.....	371	919	12.9	8.3	5.5	6.0	7.5	10.0	16.0	23.5	30.0
14.75-15.24 YEARS.....	362	996	12.0	6.6	5.5	6.0	7.5	10.0	14.5	22.0	27.0
15.25-15.74 YEARS.....	339	1,012	12.1	6.8	6.0	6.5	7.5	10.0	14.5	21.5	27.0
15.75-16.24 YEARS.....	358	984	12.5	7.2	6.0	7.0	8.0	10.0	13.5	24.0	28.5
16.25-16.74 YEARS.....	320	859	13.2	7.9	6.0	7.0	8.0	10.5	15.0	24.0	31.0
16.75-17.24 YEARS.....	377	1,137	14.3	8.4	6.0	7.0	8.0	11.5	17.0	26.5	32.1
17.25-17.74 YEARS.....	299	832	14.5	9.1	6.5	7.0	8.0	12.0	17.5	26.0	33.0
17.75-18.24 YEARS.....	188	854	14.3	7.3	6.0	7.0	9.0	12.0	18.0	25.0	26.0
18.25-18.99 YEARS.....	106	1,665	13.6	6.6	6.5	7.0	9.0	11.0	17.5	22.0	28.0
19.00-19.99 YEARS.....	137	1,606	15.1	9.0	6.0	7.0	8.0	13.0	19.0	27.0	32.0
20.00-20.99 YEARS.....	236	1,859	14.4	7.7	6.5	7.0	9.0	12.0	18.0	25.0	31.0

<sup>1</sup>THOSE CELLS CONTAINING SUBJECTS FROM NHANES I AND NHES II OR NHES III HAVE BEEN CUT IN HALF TO MAINTAIN REPRESENTATIVENESS

Table 31. Selected smoothed percentiles for upper arm girth of persons ages 2-18 years, by sex and age: United States, 1963-65, 1966-70, and 1971-74

Sex and age	Smoothed <sup>1</sup> percentile						
	5th	10th	25th	50th	75th	90th	95th
<b>Male</b>							
Upper arm girth in centimeters							
2.0 years .....	14.3	14.6	15.3	16.0	17.1	17.7	18.6
2.5 years .....	14.5	14.9	15.6	16.3	17.2	17.8	18.4
3.0 years .....	14.7	15.1	15.8	16.5	17.4	17.9	18.4
3.5 years .....	14.9	15.3	16.0	16.7	17.6	18.1	18.6
4.0 years .....	15.0	15.4	16.1	16.9	17.7	18.4	18.8
4.5 years .....	15.1	15.5	16.3	17.1	17.9	18.7	19.2
5.0 years .....	15.1	15.6	16.4	17.2	18.1	19.0	19.6
5.5 years .....	15.2	15.7	16.5	17.3	18.3	19.4	20.2
6.0 years .....	15.3	15.8	16.6	17.5	18.5	19.8	20.7
6.5 years .....	15.4	15.9	16.7	17.7	18.7	20.2	21.3
7.0 years .....	15.5	16.0	16.9	17.9	19.0	20.7	22.0
7.5 years .....	15.7	16.2	17.1	18.1	19.4	21.2	22.6
8.0 years .....	15.9	16.4	17.3	18.4	19.8	21.8	23.2
8.5 years .....	16.2	16.7	17.6	18.8	20.2	22.3	23.9
9.0 years .....	16.5	17.0	18.0	19.1	20.7	22.9	24.5
9.5 years .....	16.8	17.3	18.3	19.6	21.2	23.5	25.1
10.0 years .....	17.2	17.7	18.8	20.0	21.8	24.1	25.7
10.5 years .....	17.6	18.1	19.2	20.5	22.4	24.8	26.4
11.0 years .....	18.0	18.6	19.7	21.1	23.0	25.4	27.0
11.5 years .....	18.5	19.0	20.2	21.6	23.6	26.0	27.6
12.0 years .....	18.9	19.6	20.7	22.2	24.2	26.7	28.2
12.5 years .....	19.4	20.1	21.3	22.8	24.9	27.4	28.9
13.0 years .....	19.9	20.6	21.8	23.4	25.6	28.0	29.5
13.5 years .....	20.4	21.1	22.4	24.0	26.2	28.7	30.2
14.0 years .....	20.9	21.7	23.0	24.6	26.9	29.4	30.8
14.5 years .....	21.4	22.2	23.5	25.2	27.6	30.0	31.5
15.0 years .....	22.0	22.7	24.1	25.8	28.2	30.7	32.2
15.5 years .....	22.4	23.3	24.7	26.4	28.8	31.4	32.8
16.0 years .....	22.9	23.8	25.2	26.9	29.4	32.0	33.5
16.5 years .....	23.4	24.3	25.8	27.5	30.0	32.6	34.2
17.0 years .....	23.9	24.8	26.3	28.0	30.6	33.2	35.0
17.5 years .....	24.3	25.3	26.8	28.5	31.1	33.8	35.7
18.0 years .....	24.7	25.8	27.2	29.0	31.5	34.3	36.4
<b>Female</b>							
2.0 years .....	13.8	14.3	15.0	15.9	16.5	17.2	17.9
2.5 years .....	14.0	14.5	15.3	16.1	16.7	17.4	18.2
3.0 years .....	14.3	14.7	15.5	16.2	16.9	17.6	18.5
3.5 years .....	14.5	14.9	15.6	16.4	17.1	17.9	18.8
4.0 years .....	14.7	15.1	15.8	16.6	17.4	18.2	19.2
4.5 years .....	14.8	15.2	16.0	16.8	17.6	18.6	19.6
5.0 years .....	15.0	15.4	16.2	17.0	17.9	19.0	20.1
5.5 years .....	15.1	15.6	16.4	17.3	18.2	19.4	20.5
6.0 years .....	15.2	15.7	16.5	17.5	18.6	19.9	21.0
6.5 years .....	15.4	15.9	16.7	17.8	18.9	20.4	21.6
7.0 years .....	15.5	16.1	17.0	18.0	19.3	20.9	22.1
7.5 years .....	15.7	16.3	17.2	18.4	19.8	21.5	22.7
8.0 years .....	15.9	16.5	17.4	18.7	20.2	22.1	23.3
8.5 years .....	16.1	16.7	17.7	19.1	20.7	22.7	23.9
9.0 years .....	16.3	17.0	18.1	19.4	21.2	23.3	24.6
9.5 years .....	16.6	17.3	18.4	19.9	21.7	23.9	25.2
10.0 years .....	17.0	17.7	18.8	20.3	22.2	24.6	26.0
10.5 years .....	17.4	18.1	19.3	20.8	22.8	25.2	26.7
11.0 years .....	17.7	18.4	19.7	21.3	23.4	25.8	27.4
11.5 years .....	18.2	18.9	20.2	21.8	24.0	26.5	28.1
12.0 years .....	18.6	19.3	20.6	22.3	24.5	27.1	28.8
12.5 years .....	19.0	19.7	21.1	22.8	25.1	27.7	29.5
13.0 years .....	19.4	20.1	21.6	23.3	25.6	28.3	30.2
13.5 years .....	19.9	20.5	22.0	23.8	26.2	28.8	30.8
14.0 years .....	20.3	20.9	22.4	24.2	26.6	29.3	31.4
14.5 years .....	20.6	21.3	22.8	24.6	27.1	29.8	31.9
15.0 years .....	21.0	21.7	23.2	25.0	27.5	30.2	32.4
15.5 years .....	21.3	22.0	23.5	25.4	27.8	30.6	32.8
16.0 years .....	21.6	22.3	23.8	25.6	28.1	30.9	33.2
16.5 years .....	21.8	22.5	24.0	25.9	28.3	31.2	33.4
17.0 years .....	22.0	22.7	24.2	26.0	28.5	31.4	33.6
17.5 years .....	22.1	22.8	24.2	26.1	28.6	31.5	33.7
18.0 years .....	22.1	22.9	24.2	26.2	28.5	31.6	33.7

<sup>1</sup>Smoothed by cubic-spline approximation.



Table 32. Selected smoothed percentiles for triceps skinfold of persons ages 2-18 years, by sex, and age: United States, 1963-65, 1966-70, and 1971-74

Sex and age	Smoothed <sup>1</sup> percentile						
	5th	10th	25th	50th	75th	90th	95th
<b>Male</b>							
Triceps skinfold in millimeters							
2.0 years.....	6.2	6.9	8.2	10.3	12.1	14.1	15.4
2.5 years.....	6.1	6.8	8.0	10.0	11.8	13.7	14.9
3.0 years.....	6.0	6.7	7.9	9.8	11.5	13.4	14.4
3.5 years.....	5.8	6.6	7.7	9.5	11.2	13.1	14.1
4.0 years.....	5.7	6.5	7.6	9.3	10.9	12.8	13.9
4.5 years.....	5.6	6.4	7.4	9.0	10.7	12.6	13.8
5.0 years.....	5.4	6.3	7.3	8.8	10.5	12.5	13.8
5.5 years.....	5.3	6.1	7.1	8.6	10.4	12.4	13.9
6.0 years.....	5.2	6.0	7.0	8.5	10.3	12.4	14.1
6.5 years.....	5.1	5.9	6.9	8.4	10.2	12.5	14.5
7.0 years.....	5.0	5.8	6.8	8.3	10.3	12.7	14.9
7.5 years.....	4.9	5.7	6.7	8.2	10.4	13.0	15.4
8.0 years.....	4.9	5.6	6.7	8.2	10.5	13.4	16.1
8.5 years.....	4.8	5.6	6.6	8.3	10.8	14.0	16.9
9.0 years.....	4.8	5.5	6.7	8.4	11.1	14.6	17.8
9.5 years.....	4.8	5.5	6.7	8.6	11.5	15.5	18.7
10.0 years.....	4.9	5.6	6.8	8.8	11.9	16.4	19.8
10.5 years.....	4.9	5.6	6.9	9.0	12.4	17.4	20.8
11.0 years.....	4.9	5.6	7.0	9.3	12.8	18.3	21.8
11.5 years.....	5.0	5.7	7.0	9.4	13.2	19.1	22.7
12.0 years.....	4.9	5.7	7.1	9.6	13.4	19.8	23.4
12.5 years.....	4.9	5.6	7.1	9.6	13.6	20.2	23.9
13.0 years.....	4.8	5.6	7.0	9.6	13.5	20.3	24.1
13.5 years.....	4.6	5.4	6.8	9.4	13.3	20.1	24.0
14.0 years.....	4.5	5.3	6.6	9.1	13.0	19.6	23.7
14.5 years.....	4.3	5.1	6.4	8.7	12.5	19.0	23.2
15.0 years.....	4.1	4.9	6.2	8.4	12.0	18.2	22.7
15.5 years.....	3.9	4.7	5.9	8.0	11.5	17.4	22.1
16.0 years.....	3.8	4.6	5.8	7.7	11.2	16.8	21.6
16.5 years.....	3.8	4.5	5.6	7.4	10.9	16.2	21.3
17.0 years.....	3.8	4.5	5.6	7.3	10.9	16.0	21.3
17.5 years.....	3.9	4.5	5.7	7.3	11.1	16.1	21.6
18.0 years.....	4.2	4.6	5.9	7.5	11.7	16.6	22.3
<b>Female</b>							
2.0 years.....	6.4	7.0	8.4	10.3	12.1	14.0	15.2
2.5 years.....	6.4	7.1	8.4	10.3	12.0	13.7	15.0
3.0 years.....	6.4	7.1	8.4	10.2	11.9	13.5	14.9
3.5 years.....	6.4	7.1	8.4	10.2	11.8	13.4	15.0
4.0 years.....	6.3	7.1	8.3	10.2	11.9	13.5	15.2
4.5 years.....	6.3	7.1	8.3	10.2	11.9	13.7	15.5
5.0 years.....	6.2	7.0	8.3	10.2	12.0	13.9	15.9
5.5 years.....	6.2	7.0	8.2	10.3	12.2	14.3	16.4
6.0 years.....	6.1	6.9	8.2	10.3	12.3	14.8	16.9
6.5 years.....	6.1	6.9	8.2	10.4	12.5	15.3	17.5
7.0 years.....	6.0	6.8	8.2	10.4	12.8	15.8	18.2
7.5 years.....	6.0	6.8	8.2	10.5	13.0	16.5	18.9
8.0 years.....	6.0	6.8	8.2	10.6	13.4	17.1	19.7
8.5 years.....	6.0	6.7	8.3	10.8	13.7	17.8	20.4
9.0 years.....	6.0	6.8	8.4	11.0	14.1	18.5	21.2
9.5 years.....	6.0	6.8	8.5	11.2	14.5	19.1	22.0
10.0 years.....	6.1	6.9	8.6	11.4	15.0	19.8	22.8
10.5 years.....	6.2	7.0	8.8	11.6	15.4	20.4	23.5
11.0 years.....	6.3	7.2	9.0	11.9	15.9	21.1	24.2
11.5 years.....	6.4	7.3	9.2	12.2	16.4	21.6	24.9
12.0 years.....	6.6	7.6	9.5	12.6	16.9	22.2	25.6
12.5 years.....	6.7	7.8	9.8	12.9	17.5	22.8	26.2
13.0 years.....	6.9	8.0	10.1	13.3	18.0	23.3	26.8
13.5 years.....	7.1	8.3	10.4	13.7	18.5	23.8	27.4
14.0 years.....	7.3	8.5	10.7	14.1	19.0	24.2	28.0
14.5 years.....	7.5	8.8	11.1	14.5	19.5	24.7	28.5
15.0 years.....	7.7	9.1	11.4	14.8	20.0	25.1	29.0
15.5 years.....	7.9	9.3	11.8	15.2	20.5	25.5	29.4
16.0 years.....	8.0	9.6	12.2	15.6	20.9	25.9	29.8
16.5 years.....	8.2	9.8	12.5	16.0	21.3	26.3	30.1
17.0 years.....	8.4	10.0	12.8	16.3	21.7	26.7	30.4
17.5 years.....	8.5	10.2	13.2	16.6	22.0	27.0	30.7
18.0 years.....	8.6	10.4	13.5	17.0	22.2	27.3	30.9

<sup>1</sup>Smoothed by cubic-spline approximation.

Table 33. Selected smoothed percentiles for subscapular skinfold of persons ages 2-18 years, by sex and age: United States, 1963-65, 1966-70, and 1971-74

Sex and age	Smoothed <sup>1</sup> percentile						
	5th	10th	25th	50th	75th	90th	95th
<b>Male</b>							
Subscapular skinfold in millimeters							
2.0 years.....	3.7	4.0	4.6	5.6	6.9	8.4	9.6
2.5 years.....	3.5	3.9	4.4	5.4	6.5	7.5	8.6
3.0 years.....	3.3	3.9	4.3	5.2	6.2	6.9	7.9
3.5 years.....	3.2	3.8	4.2	5.0	6.0	6.5	7.5
4.0 years.....	3.1	3.7	4.1	4.9	5.8	6.3	7.4
4.5 years.....	3.1	3.7	4.0	4.8	5.7	6.4	7.5
5.0 years.....	3.0	3.7	4.0	4.7	5.6	6.5	7.8
5.5 years.....	3.0	3.6	3.9	4.6	5.6	6.8	8.2
6.0 years.....	3.0	3.6	3.9	4.6	5.6	7.2	8.8
6.5 years.....	3.0	3.6	3.9	4.6	5.7	7.7	9.5
7.0 years.....	3.0	3.6	3.9	4.6	5.8	8.2	10.3
7.5 years.....	3.0	3.6	3.9	4.7	6.0	8.8	11.1
8.0 years.....	3.1	3.6	3.9	4.7	6.1	9.4	12.0
8.5 years.....	3.1	3.6	3.9	4.8	6.3	9.9	12.8
9.0 years.....	3.2	3.7	4.0	4.9	6.4	10.4	13.6
9.5 years.....	3.2	3.7	4.0	5.0	6.6	10.9	14.4
10.0 years.....	3.3	3.8	4.1	5.0	6.8	11.4	15.2
10.5 years.....	3.4	3.8	4.2	5.2	7.0	11.8	15.9
11.0 years.....	3.4	3.9	4.3	5.3	7.2	12.2	16.6
11.5 years.....	3.5	3.9	4.4	5.4	7.4	12.6	17.2
12.0 years.....	3.6	4.0	4.5	5.6	7.6	13.0	17.9
12.5 years.....	3.6	4.1	4.6	5.7	7.9	13.4	18.5
13.0 years.....	3.7	4.2	4.8	5.9	8.1	13.8	19.1
13.5 years.....	3.8	4.3	5.0	6.1	8.4	14.2	19.7
14.0 years.....	3.9	4.4	5.1	6.3	8.6	14.6	20.3
14.5 years.....	4.0	4.6	5.3	6.5	8.9	15.1	20.9
15.0 years.....	4.2	4.7	5.5	6.7	9.2	15.5	21.5
15.5 years.....	4.3	4.8	5.7	7.0	9.5	16.1	22.1
16.0 years.....	4.4	5.0	5.9	7.2	9.9	16.6	22.7
16.5 years.....	4.6	5.2	6.1	7.5	10.2	17.3	23.3
17.0 years.....	4.8	5.4	6.4	7.8	10.6	18.0	24.0
17.5 years.....	4.9	5.5	6.6	8.2	11.0	18.7	24.6
18.0 years.....	5.1	5.7	6.8	8.5	11.4	19.5	25.3
<b>Female</b>							
2.0 years.....	3.8	4.0	4.8	5.8	7.4	8.6	9.4
2.5 years.....	3.7	4.0	4.7	5.6	7.0	8.0	9.1
3.0 years.....	3.6	4.0	4.6	5.4	6.6	7.6	8.9
3.5 years.....	3.5	4.0	4.5	5.3	6.4	7.4	9.0
4.0 years.....	3.5	4.0	4.4	5.2	6.2	7.4	9.2
4.5 years.....	3.4	4.0	4.3	5.1	6.2	7.6	9.6
5.0 years.....	3.4	4.0	4.3	5.0	6.2	7.9	10.1
5.5 years.....	3.3	4.0	4.2	5.0	6.2	8.4	10.7
6.0 years.....	3.3	4.0	4.2	5.0	6.4	8.9	11.5
6.5 years.....	3.3	4.0	4.2	5.1	6.6	9.6	12.3
7.0 years.....	3.3	4.0	4.2	5.2	6.9	10.3	13.2
7.5 years.....	3.3	4.0	4.3	5.3	7.2	11.1	14.2
8.0 years.....	3.4	4.0	4.4	5.4	7.6	12.0	15.2
8.5 years.....	3.4	4.0	4.5	5.6	8.0	12.8	16.2
9.0 years.....	3.6	4.0	4.6	5.8	8.4	13.6	17.2
9.5 years.....	3.7	4.0	4.8	6.1	8.9	14.5	18.2
10.0 years.....	3.8	4.1	5.0	6.4	9.4	15.3	19.2
10.5 years.....	4.0	4.3	5.2	6.7	9.9	16.2	20.2
11.0 years.....	4.1	4.5	5.4	7.0	10.4	17.0	21.2
11.5 years.....	4.3	4.6	5.7	7.3	11.0	17.8	22.2
12.0 years.....	4.5	4.8	5.9	7.7	11.5	18.6	23.2
12.5 years.....	4.6	5.1	6.2	8.1	12.1	19.3	24.1
13.0 years.....	4.8	5.3	6.4	8.4	12.6	20.1	25.0
13.5 years.....	5.0	5.5	6.7	8.8	13.2	20.8	25.8
14.0 years.....	5.2	5.7	7.0	9.2	13.8	21.5	26.6
14.5 years.....	5.4	5.9	7.2	9.5	14.3	22.1	27.4
15.0 years.....	5.5	6.2	7.4	9.9	14.8	22.7	28.1
15.5 years.....	5.7	6.3	7.7	10.2	15.4	23.2	28.7
16.0 years.....	5.8	6.5	7.9	10.6	15.8	23.7	29.2
16.5 years.....	6.0	6.7	8.1	10.9	16.3	24.2	29.7
17.0 years.....	6.1	6.8	8.2	11.2	16.7	24.6	30.1
17.5 years.....	6.2	7.0	8.4	11.5	17.1	24.9	30.4
18.0 years.....	6.3	7.0	8.5	11.7	17.5	25.1	30.6

<sup>1</sup>Smoothed by cubic-spline approximation.

TABLE 34. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY EXTENSION OF RIGHT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

EXTENSION OF RIGHT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 150.....	5.8	5.1	6.3	6.2	.8	10.5	7.2	4.0	3.1	.6
150-160.....	53.0	56.5	49.9	53.5	48.4	62.7	57.9	48.5	47.3	40.5
165 OR 170.....	36.2	35.0	37.4	35.7	41.1	23.6	31.9	44.1	44.7	43.2
175 OR 180.....	5.0	3.4	6.4	4.5	9.7	3.3	3.1	3.3	4.8	15.7

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 35. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY EXTENSION OF LEFT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

EXTENSION OF LEFT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 150.....	5.8	4.1	7.3	6.1	2.0	10.6	7.5	4.4	1.3	2.1
150-160.....	56.3	57.1	55.5	57.4	45.9	60.8	59.5	56.4	55.0	42.5
165 OR 170.....	34.1	36.8	31.6	33.1	43.7	27.2	30.7	36.6	36.9	45.8
175 OR 180.....	3.9	2.1	5.5	3.4	8.4	1.5	2.4	2.7	6.8	9.6

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 36. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY ABDUCTION OF RIGHT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

ABDUCTION OF RIGHT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 115.....	3.1	2.6	3.7	2.9	6.1	1.3	2.0	2.3	5.8	6.8
115 OR 120.....	16.0	14.0	17.8	15.4	21.2	13.1	10.0	17.4	20.1	24.6
125 OR 130.....	34.4	34.9	33.9	34.4	36.8	32.0	33.0	37.8	35.8	33.4
135 OR 140.....	30.1	31.0	29.2	30.6	23.3	32.1	35.9	30.0	25.9	21.5
145 OR 150.....	12.2	12.3	12.2	12.8	7.9	17.4	14.5	7.9	9.4	10.0
155-180.....	4.1	5.1	3.2	4.0	4.8	4.1	4.7	4.6	3.0	3.7

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 37. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY ABDUCTION OF LEFT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

ABDUCTION OF LEFT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 115.....	2.6	2.7	2.6	2.6	3.1	.9	1.6	2.6	3.9	6.4
115 OR 120.....	19.1	16.1	21.7	18.4	24.5	11.2	15.4	19.4	26.5	30.3
125 OR 130.....	36.0	33.8	38.1	36.6	33.9	35.8	31.7	41.4	35.2	35.4
135 OR 140.....	26.0	27.1	24.9	26.0	25.9	26.7	31.5	26.5	22.6	18.3
145 OR 150.....	11.9	13.7	10.3	11.9	9.2	18.3	13.2	7.7	9.3	8.1
155-180.....	4.4	6.7	2.3	4.5	3.3	7.1	6.6	2.3	2.5	1.5

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 38. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY FLEXION OF RIGHT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

FLEXION OF RIGHT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 50.....	14.8	13.2	16.2	15.8	6.6	19.7	15.4	13.4	9.6	13.6
50 OR 55.....	31.7	34.5	29.1	32.8	18.3	31.1	35.3	31.7	34.5	22.0
60-70.....	42.0	43.8	40.4	41.3	50.8	40.9	37.7	44.4	42.5	47.3
75-85.....	8.2	6.5	9.8	7.5	15.3	6.9	7.8	7.0	9.3	12.9
90-180.....	3.3	1.9	4.5	2.6	9.0	1.4	3.9	3.5	4.1	4.2

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 39. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY FLEXION OF LEFT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

FLEXION OF LEFT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 50.....	15.4	14.2	16.5	16.2	8.7	19.3	21.2	12.6	9.9	10.4
50 OR 55.....	32.9	32.8	32.9	33.8	22.3	33.1	34.1	34.6	31.3	29.2
60-70.....	39.2	44.2	34.7	38.7	45.6	39.9	32.6	41.3	41.3	42.5
75-85.....	9.4	7.4	11.1	8.7	16.6	5.6	9.1	9.1	11.8	14.5
90-180.....	3.2	1.3	4.8	2.7	6.9	2.1	3.0	2.4	5.6	3.4

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 40. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY INTERNAL ROTATION OF RIGHT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

INTERNAL ROTATION OF RIGHT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 50.....	6.7	9.9	3.8	7.1	3.3	9.2	5.4	7.7	5.5	4.0
50 OR 55.....	35.1	39.3	31.4	37.1	17.0	42.3	39.8	30.9	31.7	25.2
60-70.....	51.9	45.5	57.7	50.2	67.6	43.5	49.0	56.2	55.8	60.5
75-90.....	2.9	1.8	4.0	2.5	7.4	2.6	2.6	3.0	2.6	4.7

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 41. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY EXTERNAL ROTATION OF LEFT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

EXTERNAL ROTATION OF LEFT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 50.....	9.3	6.8	11.5	9.5	6.0	16.9	9.1	7.7	4.6	4.0
50 OR 55.....	38.0	30.7	44.6	38.6	31.3	38.2	43.9	42.7	35.9	21.7
60-70.....	46.1	55.4	37.6	45.6	52.3	40.0	43.0	44.6	51.0	59.2
75-90.....	3.4	3.9	2.9	3.1	5.6	1.3	1.3	3.0	5.7	8.6

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 42. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY EXTERNAL ROTATION OF RIGHT HIP, ACCORDING TO SEX, RACE, AND AGE: UNITED STATES, 1971-72

EXTERNAL ROTATION OF RIGHT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 110.....	3.6	5.6	1.8	3.4	5.4	2.1	.9	3.6	4.9	10.1
110 OR 115.....	22.7	30.2	15.9	22.1	29.3	17.0	17.1	23.1	26.0	39.0
120 OR 125.....	45.9	42.7	48.8	46.2	41.7	46.3	46.0	47.6	50.2	35.3
130 OR 135.....	23.3	19.0	27.2	23.6	20.7	25.5	32.4	22.4	17.7	12.6
140-160.....	4.5	2.5	6.2	4.6	3.0	9.2	3.6	3.4	1.2	2.9

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 43. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY INTERNAL ROTATION OF LEFT HIP, ACCORDING TO SEX, RACE, AND AGE:  
UNITED STATES, 1971-72

INTERNAL ROTATION OF LEFT HIP IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THAN 110.....	3.0	2.5	3.6	2.1	10.7	.8	2.1	3.6	5.8	4.2
110 OR 115.....	29.0	23.8	33.7	27.0	48.2	24.3	22.4	35.1	29.4	38.6
120 OR 125.....	49.4	49.8	49.1	51.5	31.2	54.7	47.8	46.9	50.3	45.0
130 OR 135.....	16.0	19.7	12.6	16.8	8.2	16.5	22.8	12.8	14.4	11.0
140-180.....	2.4	4.1	.8	2.6	.4	3.7	4.2	1.7	.1	1.0

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 44. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY FLEXION OF RIGHT KNEE, ACCORDING TO SEX, RACE, AND AGE:  
UNITED STATES, 1971-72

FLEXION OF RIGHT KNEE IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THEN 60.....	89.3	90.5	88.2	90.3	79.7	92.3	92.1	92.1	84.8	79.5
60-70.....	9.8	8.9	10.6	9.0	18.1	7.7	7.2	6.6	14.8	17.5
75-85.....	.5	.4	.6	.4	2.0	-	.1	.7	.5	2.1
90-180.....	.4	.1	.6	.4	.2	-	.6	.5	.0	.8

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

TABLE 45. PERCENT DISTRIBUTION OF ADULTS AGES 25-74 YEARS BY FLEXION OF LEFT KNEE, ACCORDING TO SEX, RACE, AND AGE:  
UNITED STATES, 1971-72

FLEXION OF LEFT KNEE IN DEGREES	ALL ADULTS <sup>1</sup>	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
TOTAL <sup>2</sup> .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
LESS THEN 60.....	88.5	91.7	85.6	89.7	76.9	91.8	91.2	88.7	85.5	80.6
60-70.....	10.2	7.1	12.9	9.1	20.4	7.2	8.1	9.9	13.2	16.2
75-85.....	.4	.2	.6	.3	1.7	-	.2	.0	.8	1.8
90-180.....	1.0	.9	1.0	1.0	1.0	1.0	.6	1.3	.5	1.4

<sup>1</sup>INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.  
<sup>2</sup>MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

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## APPENDIX I

### STATISTICAL NOTES

#### Survey Design

The sample design for NHANES I is basically a three-stage, stratified, probability sample of loose clusters of persons in land-based segments. The sample was designed to be representative of the civilian noninstitutionalized population, ages 1-74 years, living within the coterminous United States, with the exception that all persons residing upon reservation lands set aside for the use of American Indians would be excluded.

In the first stage of the design, 100 primary sampling units (PSU's) were selected with probability proportional to size from the approximately 1,900 PSU's into which the United States has been divided. (Ten of the PSU's were selected into the sample twice, so that in fact there were only 90 distinct PSU's selected.) A PSU consists of a county, a small group of contiguous counties, or a standard metropolitan statistical area. Before selecting the 100 PSU's for inclusion in NHANES I, the approximately 1,900 PSU's were first grouped into 40 strata of which 15 contained only one PSU, consisting of a single large metropolitan area with a population of more than 2 million. All 15 of the largest PSU's and three PSU's from each of the other 25 strata were selected. In the nutrition examination component in NHANES I, two PSU's from each of the other 25 strata were selected resulting in a total of 65 PSU's for this component sample design.

At the second stage of the design a sample of segments, consisting of approximately six households each, was systematically selected within each selected PSU. Although the 1970 census data were used as the frame for sampling within PSU's when they became available, the calendar of operations required that the 1960

census data be used for the first 44 selected PSU's. Generally, three types of segments were used: (1) segments from the Census Listing Books that were created in taking the population census, (2) area segments that are defined geographically, and (3) permit segments, using updated lists of building permits issued in sample PSU's since January 1970.

At the third stage of sampling, a list of all eligible persons was made within each selected segment. From this list, persons were then systematically selected for inclusion in NHANES I.

A more complete description of the survey design is included in *Vital and Health Statistics*, Series 1, No. 10a<sup>1</sup> and supplemented in Series 1, No. 14.<sup>2</sup>

Because the design of NHANES I is a multi-stage probability sample, it is necessary to use complex procedures in the derivation of estimates. Three basic operations are involved.

Inflation by the reciprocal of the probability of selection. The probability of selection is the product of the probabilities of selection from each step of selection in the design (PSU, segment, and sample person).

*Nonresponse adjustment.*—The estimates are inflated by a multiplication factor calculated within each PSU for each of five selected income groups. The numerator of these factors consists of the sum of the weights for sample persons resulting from the reciprocal of the probability of selection and the denominator consists of the sum of the weights for examined persons also resulting from the reciprocal of the probability of selection.

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NOTE: A list of references follows the text.

Table I. Number of examined persons in the NHANES I nutrition 65-location design and the estimated number of persons in the U.S. population as of November 1972, by sex, race, and age at examination: United States, 1971-74

Age at examination	Total		Male						Female					
	Sample size	Population in thousands	All races		White		Black		All races		White		Black	
			Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands
Total.....	20,749	193,976	8,820	94,240	7,004	82,741	1,707	10,414	11,929	99,737	9,347	86,868	2,456	12,000
1 year.....	553	3,313	286	1,693	211	1,402	72	280	267	1,620	189	1,328	73	257
2 years.....	570	3,455	298	1,747	217	1,461	77	267	272	1,708	203	1,434	66	261
3 years.....	600	3,508	308	1,807	226	1,536	72	212	292	1,701	211	1,438	78	245
4-5 years.....	1,172	6,672	577	3,379	436	2,866	138	486	595	3,294	428	2,755	161	511
6-11 years.....	2,057	23,356	1,026	11,914	764	10,073	251	1,724	1,031	11,442	763	9,634	262	1,794
12-17 years.....	2,126	24,654	1,064	12,520	806	10,709	250	1,692	1,062	12,134	796	10,355	259	1,690
18-19 years.....	540	7,352	260	3,673	203	3,206	52	404	280	3,679	208	3,159	70	504
20-24 years.....	1,756	17,325	513	8,110	423	7,094	80	866	1,243	9,215	956	7,972	259	1,073
25-34 years.....	2,700	26,936	804	13,003	672	11,594	119	1,232	1,896	13,933	1,539	12,161	335	1,646
35-44 years.....	2,328	22,268	664	10,676	569	9,516	87	1,005	1,664	11,593	1,302	10,111	334	1,318
45-54 years.....	1,601	23,313	765	11,150	628	10,039	130	1,057	836	12,163	705	10,879	126	1,237
55-64 years.....	1,267	19,049	598	9,073	505	8,275	85	703	669	9,976	551	9,037	115	871
65-74 years.....	3,479	12,774	1,657	5,496	1,344	4,970	294	486	1,822	7,277	1,496	6,603	318	652

NOTE: The numbers in this table constitute estimates and closely approximate the U.S. population as estimated by the U.S. Bureau of the Census as of Nov. 1, 1972.

Table II. Number of examined persons in the NHANES I detailed 100-location design and the estimated number of persons in the U.S. population as of February 1974, by sex, race, and age at examination: United States, 1971-75

Age at examination	Total		Male						Female					
	Sample size	Population in thousands	All races		White		Black		All races		White		Black	
			Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands
25-74 years.....	6,913	106,639	3,171	50,587	2,744	45,303	390	4,693	3,742	56,052	3,224	49,583	483	5,963
25-34 years.....	1,563	28,297	672	13,663	587	12,123	72	1,303	891	14,634	775	12,713	103	1,736
35-44 years.....	1,216	22,302	528	10,761	469	9,579	52	1,024	688	11,541	579	10,003	97	1,392
45-54 years.....	1,613	23,549	746	11,288	642	10,131	99	1,095	867	12,260	754	10,922	107	1,263
55-64 years.....	1,288	19,346	626	9,192	544	8,336	76	768	662	10,154	574	9,164	85	906
65-74 years.....	1,233	13,145	599	5,682	502	5,134	91	504	634	7,463	542	6,781	91	667

NOTE: The numbers in this table constitute estimates and closely approximate the U.S. population as estimated by the U.S. Bureau of the Census as of Feb. 1, 1974.

Table III. Number of examined persons in the NHANES I detailed 35-location design and the estimated number of persons in the U.S. population as of November 1971, by sex, race, and age at examination: United States, 1971-72

Age at examination	Total		Male						Female					
	Sample size	Population in thousands	All races		White		Black		All races		White		Black	
			Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands	Sample size	Population in thousands
25-74 years.....	1,891	23,934	907	13,013	701	11,473	194	1,389	984	10,921	761	9,855	217	999
25-34 years.....	337	4,427	153	2,915	121	2,569	28	303	184	1,511	147	1,356	37	156
35-44 years.....	309	3,767	141	2,450	119	2,175	20	241	168	1,317	124	1,136	41	167
45-54 years.....	460	7,551	228	3,704	176	3,303	51	399	232	3,847	180	3,473	51	370
55-64 years.....	368	6,428	184	3,139	138	2,712	44	361	184	3,289	144	3,046	38	194
65-74 years.....	417	1,761	201	805	147	714	51	84	216	956	166	844	50	112

NOTE: The numbers in this table constitute estimates and closely approximate the U.S. population as estimated by the U.S. Bureau of the Census as of Nov. 1, 1971.

*Poststratification by age-sex-race.*—The estimates are ratio adjusted within each of 60 age-sex-race cells to an independent estimate, provided by the U.S. Bureau of the Census, of the population of each cell as of the midpoint of the survey. The effect of the ratio-estimating process is to make the sample more closely representative of the civilian noninstitutionalized population by age, sex, and race, which thereby reduces sampling variance.

In NHANES I the locations were drawn for the detailed examination component so that locations 1-35, 1-65, 66-100, and 1-100 are separate but overlapping probability samples of the civilian noninstitutionalized population ages 25-74 years. Examinations for the first 65 locations were conducted between April 1971 and June 1974. For the remaining 35 locations, examinations were started in July 1974 and completed by October 1975. The total examined sample population and the estimated U.S. population for locations 1-35, 1-65, and 1-100 are presented in tables I, II, and III.

### Missing Data

Examination surveys are subject to the loss of information not only through the failure to examine all sample persons but also from the failure to obtain and record all items of information for examined persons. For a number of examinees, one or more of the anthropometric measurements were not available. The extent of these missing measurements is indicated in table IV. The number of missing goniometric measures is in table V.

For most measures, estimates for missing anthropometric data were made on the basis of a multiple regression type decision, substituting for the missing measurements those of an individual who was of the same age, sex, and race, and had other dimensions similar to those available for the examinee with incomplete data. Skinfold measurements recorded as "tight skin" were imputed using the same procedure as those that were not recorded.

For those few sample persons with no anthropometric measurements available, a respondent of the same age-sex-race group was selected at random and his measurements were assigned to the nonexamined person.

Table IV. Number of examined persons in the NHANES I nutrition 65-location design with missing anthropometric measurements: United States, 1971-74

Measurement missing	Number of examined persons
Elbow breadth .....	62
Triceps skinfold .....	136
Subscapular skinfold.....	197
Bitrochanteric breadth.....	66
Upper arm girth .....	64
Sitting height	
3-74 years.....	273
2 years (not imputed) .....	338
Chest circumference (children ages 1-7 years).....	43
Chest circumference (adults 25-74 years)	
Full inspiration .....	67
Full expiration .....	71

Table V. Number of examined persons in the NHANES I detailed 35-location design with missing goniometric measurements: United States, 1971-72

Measurement missing	Number of examined persons
Extension of right hip.....	98
Extension of left hip.....	99
Extension of right knee .....	81
Extension of left knee .....	80
Flexion of right knee.....	78
Flexion of left knee.....	78
Adduction of right hip.....	77
Adduction of left hip.....	79
Abduction of right hip.....	87
Abduction of left hip.....	90
Flexion of right hip .....	80
Flexion of left hip .....	82
Internal rotation of right hip .....	82
External rotation of right hip .....	84
Internal rotation of left hip .....	80
External rotation of left hip .....	85

No imputations were done for the chest circumference measurements on the special subsample of adults 25-74 years of age. In addition, there was no procedure defined to estimate missing data for the goniometric measures.

All findings for these data are based only on observed measures from examined persons.

## Parameter and Variance Estimation

Because each of the sample persons has an assigned statistical weight, all estimates of population parameters presented in NHES publications are computed taking this weight into consideration. Thus the estimate of a population mean  $\mu$  is computed as follows:

$$\bar{x} = \sum w_i x_i / \sum w_i;$$

where  $x_i$  is the observation or measurement on the  $i$ th person and  $w_i$  is the weight assigned to that person.

The Health and Nutrition Examination Survey has an extremely complex sampling plan, and obviously the variance estimation procedure is, by the very nature of the sample, complex as well. A method is required for estimating the reliability of findings that "reflects both losses from clustering sample cases at two stages and the gains from stratification, ratio estimation, and poststratification."<sup>20</sup>

The method of estimating variances in NHANES I is the half-sample replication technique. The method was developed at the U.S. Bureau of the Census prior to 1957. The half-sample replication technique is particularly well suited to NHANES I because the sample, although complex in design, is relatively small (20,749 persons) and is based on only 40 strata. This feature permitted the development of a variance estimation computer program that produces tables containing desired estimates of aggregates, means, and distributions, together with a table identical in format but with the estimated variances instead of the point estimates. The computations required by the method are simple, and the internal storage requirements are well within the limitation of the IBM 370-158 computer system used at the National Center for Health Statistics.

Variance estimates of anthropometric parameters computed for this report were based on 40 balanced half-sample replications. A half-sample was formed by choosing one sample PSU from each of 40 pairs of sample PSU's. To compute the variance of any statistic, this statistic is computed for each of the 40 half-samples. Then the weighted mean of the entire undivided sam-

ple is computed. The variance of the mean is the mean square deviation of each of the 40 half-sample means about the overall mean. The standard error of the mean is simply the square root of this variance of the mean. In a similar manner, the standard error of any statistic may be computed. Variance estimates for goniometric statistics included in this report were computed in a similar manner to those for anthropometric measurements, but were based on 20 balanced half-sample replications derived from the first 35 locations from NHANES I.

In order to eliminate many of the tables required to present variance estimates for all the statistics in this report, a "variance smoothing" approach has been used for the presentation of estimated variances for the anthropometric measures.

By using this approach, a variance estimate for a sample mean ( $\bar{x}_i$ ) is produced in two steps. First the simple random sample (SRS) estimate of variance is calculated by squaring the standard deviation of the sample ( $s_{x_i}$ ) and dividing by the size of the sample ( $n_i$ ). This step is summarized with the following equation:

$$\text{VAR}_{\text{SRS}}(\bar{x}_i) = (s_{x_i})^2 / n_i$$

Secondly, the SRS estimate of variance is multiplied by a design effect (defined as the effect that the complex sampling design has on the magnitude of the variances) that corresponds to the variable of interest (e.g., type of body measurement by race by sex by age) to produce the variance estimate of  $\bar{x}_i$ .

The design effects were estimated by the method of least squares. The replicated half-sample variance estimates presented were used as the dependent variables and the corresponding SRS variance estimates were used as independent variables in the model

$$\text{VAR}(\bar{x}_i) = (\text{design effect}) \times \text{VAR}_{\text{SRS}}(\bar{x}_i) + \epsilon$$

to produce the estimates of the design effects.

The estimated design effects and the correlation between the half-sample variance estimates and the "smoothed" or predicted variance estimates (giving a measure of strength of the relationship between the two, that is, the effectiveness of the fitting process) are given in table VI.

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NOTE: A list of references follows the text.

Table VI. Estimated design effects in the NHANES I, by anthropometric measurement and demographic classification: United States, 1971-1974

Anthropometric measurement	Race and sex group					
	All males	White males	Black males	All females	White females	Black females
Triceps skinfold.....	1.37	1.25	1.90	1.64	1.63	2.08
Subscapular skinfold.....	1.49	1.27	2.17	1.54	1.46	2.17
Upper arm girth.....	1.56	1.49	1.93	1.61	1.55	2.30
Elbow breadth.....	1.70	1.56	1.85	1.58	1.35	2.29
Sitting height.....	1.34	1.24	1.90	1.60	1.43	2.39
Bitrochanteric breadth.....	1.48	1.36	2.02	1.65	1.46	2.44
Chest circumference (1-7 years).....	1.46	1.37	2.14	1.84	1.61	2.77
Chest circumference:						
25-74 years, full expiration.....	4.37	5.58	8.35	6.00	6.71	5.75
25-74 years, full inspiration.....	4.12	4.92	6.62	3.97	4.47	5.95

Table VII. Standard errors of the percent by extension of the hip, according to sex, race, and age for adults ages 25-74 years: United States, 1971-72

Extension of hip in degrees	All adults	Sex		Race		Age in years				
		Male	Female	White	Black	25-34	35-44	45-54	55-64	65-74
<u>Right hip</u>										
Total.....	...	...	...	...	...	...	...	...	...	...
Less than 150.....	1.25	1.90	1.63	1.42	0.64	2.92	2.27	1.49	2.17	0.43
150, 155, or 160.....	3.52	4.27	3.67	3.53	6.26	5.04	4.13	5.03	4.94	3.03
165 or 170.....	3.02	3.49	3.07	3.13	5.29	4.35	4.28	5.12	4.08	3.70
175 or 180.....	0.98	1.17	1.23	0.94	3.00	1.59	1.16	1.04	1.61	3.68
<u>Left hip</u>										
Total.....	...	...	...	...	...	...	...	...	...	...
Less than 150.....	1.26	1.60	1.56	1.43	0.92	4.09	2.13	1.09	0.80	1.34
150, 155, or 160.....	3.41	4.05	3.92	3.38	6.35	6.72	3.34	4.20	4.64	3.98
165 or 170.....	3.01	4.02	2.92	3.03	5.74	4.79	3.22	4.14	3.76	3.89
175 or 180.....	0.79	0.48	1.45	0.79	2.23	0.87	0.85	0.91	1.61	2.92

The following example may be illustrative. The variances for the mean sitting height of black and white males age 13 years (denoted by  $\bar{x}_B$  and  $\bar{x}_W$ , respectively) are estimated using the following calculations:

$$\text{VAR}_{\text{SRS}}(\bar{x}_W) = (4.9)^2/129 = .186$$

and

$$\text{VAR}_{\text{SRS}}(\bar{x}_B) = (4.4)^2/45 = .430$$

thus, the estimated variances are

$$\text{VAR}(\bar{x}_W) = (1.24) \times (.186) = .231$$

and

$$\text{VAR}(\bar{x}_B) = (1.90) \times (.430) = .817$$

The variances used in all significance tests presented in the main text for the anthropometric measurements employed this technique.

The usual test for the difference between means (where the estimated variances are treated as constants and the covariance between the means is ignored) is used to determine

$$Z = (\bar{x}_W - \bar{x}_B) / \sqrt{\text{VAR}(\bar{x}_W) + \text{VAR}(\bar{x}_B)}$$

for the example described in the paragraph above,

$$Z = (82.32 - 78.87) / \sqrt{0.231 + 0.817}$$

$$Z = 3.37 (\rho < 0.01)$$

Estimates of the standard errors for selected statistics used in this report related to the goniometric measurements are presented in tables VII-XII.

Table VIII. Standard errors of the percent by abduction of the hip, according to sex, race, and age for adults ages 25-74 years: United States, 1971-72

Abduction of hip in degrees	All adults	Sex		Race		Age in years				
		Male	Female	White	Black	25-34	35-44	45-54	55-64	65-74
<u>Right hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 115.....	0.74	0.51	1.26	0.70	2.29	0.85	1.08	0.61	1.89	1.37
115 or 120.....	1.69	1.97	1.96	1.70	3.09	2.04	2.08	3.26	3.17	2.76
125 or 130.....	2.22	2.38	2.82	2.12	5.45	4.55	4.01	3.44	3.92	4.12
135 or 140.....	2.32	2.62	2.67	2.47	2.51	3.92	2.73	3.19	3.85	3.77
145 or 150.....	1.64	1.77	1.95	1.72	2.68	3.28	3.01	1.66	2.69	2.51
155-180.....	0.80	1.24	0.67	0.78	2.64	1.43	2.02	1.07	1.38	1.33
<u>Left hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 115.....	0.45	0.63	0.58	0.47	1.30	0.58	0.76	0.83	1.08	1.59
115 or 120.....	2.28	2.60	2.32	2.15	6.15	3.15	2.54	2.97	4.42	3.33
125 or 130.....	2.24	2.50	2.86	2.16	5.18	5.03	3.53	2.59	3.59	3.30
135 or 140.....	1.37	2.42	1.71	1.41	3.97	2.96	3.23	2.40	3.24	1.92
145 or 150.....	1.51	2.02	1.46	1.58	3.04	3.65	3.34	1.83	1.99	2.84
155-180.....	1.01	1.37	0.96	1.04	1.92	1.78	2.34	1.05	1.28	1.13

Table IX. Standard errors of the percent by rotation of the hip, according to sex, race, and age for adults ages 25-74 years: United States, 1971-72

Rotation of hip in degrees	All adults	Sex		Race		Age in years				
		Male	Female	White	Black	25-34	35-44	45-54	55-64	65-74
<u>External rotation of right hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 110.....	0.80	1.43	0.51	0.72	1.99	1.34	0.59	1.25	1.59	2.30
110 or 115.....	1.99	2.88	1.69	2.05	3.18	2.64	3.32	3.28	3.95	4.08
120 or 125.....	1.53	2.37	2.09	1.64	3.32	4.30	3.84	2.58	3.62	3.24
130 or 135.....	2.37	2.63	2.47	2.48	3.36	5.03	3.62	2.72	2.90	2.45
140-160 .....	0.87	0.79	1.21	0.87	1.85	2.11	1.14	1.24	0.78	1.71
<u>Internal rotation of left hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 110.....	0.45	0.62	0.66	0.31	2.37	0.48	0.91	1.02	1.37	1.18
110 or 115.....	2.08	2.26	2.54	2.05	6.27	4.00	3.34	2.78	3.90	3.11
120 or 125.....	1.72	2.10	2.28	1.90	5.01	3.79	3.60	1.85	4.60	2.86
130 or 135.....	2.01	2.23	2.31	2.11	3.88	3.47	4.01	1.79	3.65	2.00
140-160 .....	0.53	0.90	0.35	0.60	0.42	1.13	2.02	0.80	0.10	0.84

Table X. Standard errors of the percent by rotation of the hip, according to sex, race, and age for adults ages 25-74 years: United States, 1971-72

Rotation of hip in degrees	All adults	Sex		Race		Age in years				
		Male	Female	White	Black	25-34	35-44	45-54	55-64	65-74
<u>Internal rotation of right hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 50.....	1.16	2.17	0.74	1.26	1.77	2.24	1.68	1.61	1.52	1.54
50 or 55.....	1.46	2.32	2.11	1.51	4.21	2.92	3.77	2.24	4.31	2.73
60, 65 or 70.....	2.10	3.04	2.41	2.26	3.99	2.94	4.54	2.42	4.60	3.00
75-90 .....	0.48	0.54	0.71	0.46	2.18	1.26	0.97	0.81	1.27	1.20
<u>External rotation of left hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 50.....	1.27	0.96	1.96	1.43	1.85	3.81	1.73	1.61	1.53	1.73
50 or 55.....	1.97	2.61	2.22	2.09	5.37	3.77	4.01	4.40	3.30	3.05
60, 65 or 70.....	2.09	2.55	2.82	2.27	4.17	4.67	3.55	3.63	3.21	3.42
75-90 .....	0.62	0.95	0.67	0.59	2.46	0.58	0.75	0.89	1.84	2.59

Table XI. Standard errors of the percent by flexion of the hip, according to sex, race, and age for adults ages 25-74 years: United States, 1971-72

Flexion of hip in degrees	All adults	Sex		Race		Age in years				
		Male	Female	White	Black	25-34	35-44	45-54	55-64	65-74
<u>Right hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 50.....	1.61	2.26	2.15	1.77	2.45	2.65	3.19	2.04	3.29	3.22
50 or 55.....	1.27	1.74	2.13	1.48	3.52	3.41	3.23	2.43	3.36	3.08
60, 65 or 70.....	1.79	2.57	2.04	1.89	5.68	3.93	4.13	2.77	4.74	3.08
75, 80 or 85.....	1.08	1.20	1.39	1.10	3.21	1.78	2.83	1.61	1.87	2.20
90-180 .....	0.35	0.49	0.46	0.36	2.35	0.71	0.74	0.73	1.08	1.21
<u>Left hip</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 50.....	1.74	2.16	2.21	1.74	3.05	1.97	4.06	2.09	1.47	2.21
50 or 55.....	1.69	2.90	1.96	1.86	2.89	3.43	2.80	3.48	3.43	3.91
60, 65 or 70.....	2.43	3.34	2.72	2.65	5.15	3.17	4.41	3.97	4.02	4.56
75, 80 or 85.....	1.51	1.48	2.08	1.49	3.72	1.33	3.36	2.37	2.65	2.09
90-180 .....	0.62	0.63	0.87	0.64	2.07	1.42	1.49	0.71	1.89	0.88

Table XII. Standard errors of the percent by flexion of the knee, according to sex, race, and age for adults ages 25-74 years: United States, 1971-72

Flexion of the knee in degrees	All adults	Sex		Race		Age in years				
		Male	Female	White	Black	25-34	35-44	45-54	55-64	65-74
<u>Right knee</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 60.....	1.89	2.02	2.10	2.00	3.20	2.10	2.38	1.87	2.97	3.32
60, 65 or 70.....	1.76	1.86	2.10	1.90	2.91	2.10	2.33	1.82	2.74	2.95
75, 80 or 85.....	0.20	0.22	0.26	0.19	1.08	-	0.08	0.44	0.33	1.21
90-180 .....	0.15	0.09	0.28	0.17	0.24	-	0.53	0.41	0.03	0.55
<u>Left knee</u>										
Total .....	...	...	...	...	...	...	...	...	...	...
Less than 60.....	2.07	2.14	2.48	2.21	3.46	2.66	1.57	2.50	4.79	3.95
60, 65 or 70.....	1.93	2.01	2.25	2.01	3.45	2.38	1.63	2.32	4.65	3.51
75, 80 or 85.....	0.19	0.16	0.28	0.19	0.79	-	0.11	0.05	0.53	0.94
90-180 .....	0.28	0.42	0.34	0.33	0.68	0.72	0.49	0.72	0.38	0.81





## APPENDIX II

### DEMOGRAPHIC TERMS

*Age.*—The age for each examinee was the age prior to the examination. The age criterion used in this report was defined as the examinee's age at the time of the examination. Twenty persons who were 74 years of age at the time of the interview became 75 years of age at the time of the examination. In the adjustment and weighting procedures used to produce national estimates, these persons were included in the 74 year age group.

*Race.*—For each individual, race was recorded as "white," "black," or "other races." The last category included American Indians, Chinese, Japanese, and all races other than white or black. Mexican persons were included with "white" unless definitely known to be a race other than white. Black persons and persons of mixed black and other parentage were recorded as "black."



APPENDIX III  
DATA TAPE SUMMARY

ANTHROPOMETRIC AND GONIOMETRIC DATA TAPE—NHANES I

CATALOG NUMBER – 4111.....	201
ANTHROPOMETRY	
Examiner Number .....	208
ELBOW BREADTH	
Right side measurement .....	210
Imputation code (right side).....	213
Left side measurement .....	214
UPPER ARM GIRTH	
Right side measurement .....	217
Imputation code (right side).....	220
Left side measurement .....	221
TRICEPS SKINFOLD	
Right side measurement .....	224
Imputation code (right side).....	227
Left side measurement .....	228
SUBSCAPULAR SKINFOLD	
Right side measurement .....	231
Imputation code (right side).....	234
Left side measurement .....	235
BITROCHANTERIC BREADTH .....	238
Imputation code.....	241
SITTING HEIGHT .....	242

Imputation code.....	246
HEAD CIRCUMFERENCE (ages 1-17 only).....	247
Imputation code.....	250
CHEST CIRCUMFERENCE (Ages 1-7 only).....	251
Imputation code.....	254
WEIGHT	
In pounds.....	255
In kilograms.....	260
Imputation code.....	265
HEIGHT	
In centimeters.....	266
In inches.....	270
Imputation code.....	273
HANDEDNESS.....	274
CHEST CIRCUMFERENCE (detailed examinees only)	
Full inspiration.....	275
Full expiration.....	279
GONIOMETRY	
Examiner Number.....	307
ON STOMACH	
Extension of right hip.....	325
Extension of left hip.....	328
ON BACK	
Extension of right knee.....	331
Flexion of right knee.....	333
Flexion of right hip.....	336
Adduction of right hip.....	339
Abduction of right hip.....	341
Extension of left knee.....	344
Flexion of left knee.....	346
Flexion of left hip.....	349

Adduction of left hip .....	352
Abduction of left hip .....	354

SITTING ON TABLE

Internal rotation of right hip .....	357
External rotation of right hip .....	359
Internal rotation of left hip .....	362
External rotation of left hip .....	365



## APPENDIX IV

### MEASURING PROCEDURES AND DEFINITIONS

#### Anthropometry

Each measurement is taken by the examiner, read to the nearest tenth of a centimeter (except skinfolds which are taken to the nearest half of a millimeter) and said to the recorder. If a skinfold is too tight to be measured, "too tight" is written in the recording space for that measurement (figure I). The recorder repeats the number, records it in the proper space, and says the name of the next measurement. The examiner keeps the measuring instrument set until the recorder repeats the number. If the anthropometer becomes unset in any way before the measurement is read back, the measurement should be read again. On standing measurements, the recorder will insure that the subject stands erect.

The recorder is important not only to insure the accurate recording of the measurement but also to assist the examiner in positioning the examinee correctly. The recorder also aids the examiner by seeing that the steel tape is horizontal with the proper tension when girths are measured. The recorder, having had the same training as the examiner, should recognize an error in measurement or in reading from the wrong scale. (The anthropometer has two scales—ascending and descending.)

For the following six measurements the examinee was asked to stand with his feet together in the standard erect position.

*Bitrochanteric breadth.*—The maximum breadth of the body at the level of the femoral trochanters was measured with the top section of the anthropometer (figure II).

*Elbow breadth.*—The examinee's right arm was extended forward perpendicular to the

body. With the arm bent so the angle at the elbow forms 90 degrees with the fingers pointing up and the dorsal part of the wrist toward the examiner, the greatest breadth across the elbow joint was measured with the sliding caliper along the axis of the upper arm.

*Upper arm girth.*—The examinee's right arm was flexed 90 degrees at the elbow. The steel tape was used to measure the distance from the acromion to the end of the humerus to mark the lateral part of the arm at its midpoint. Now with the arm hanging freely, the circumference of the upper arm at the marked level was measured. The examiner was instructed not to compress the tissue.

*Chest circumference (1-7 years).*—With the child's shirt removed, the chest circumference was measured at the nipple line with the child breathing normally, arms at his sides. The steel tape passed around the child's back about 2 inches above the base of the scapula.

*Chest circumference (Detailed exam only).*—These chest girths were measurements of the bony rib cage only, not tissue measurements, and were made at the level<sup>a</sup> of the fourth intercostal space.

*A. Full expiration.*—The examinee was coached to take in a deep breath and then really let it all out.

---

<sup>a</sup>To find this level, palpate the sternal-manubrium junction which is at the level of the second intercostal space. Count down two intercostal spaces from this point to the fourth intercostal space. The tape was passed around the examinee's chest at this level.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

PUBLIC HEALTH SERVICE  
HEALTH RESOURCES ADMINISTRATION  
NATIONAL CENTER FOR HEALTH STATISTICS  
HEALTH EXAMINATION SURVEY

**BODY MEASUREMENTS**

**ASSURANCE OF CONFIDENTIALITY**  
All information which would permit identification of the individual will be held strictly confidential, will be used only by persons engaged in and for the purposes of the survey, and will not be disclosed or released to others for any other purposes (22 FR 1687).

a. Deck No. <b>111</b>	b. Examiner No. _ _ _	c. Recorder No.
---------------------------	--------------------------	-----------------

**NOTE** Measurement in cm. unless otherwise specified.  
Measure left side also if the last digit of examinee's sample number is 3 or 6.

1. Bitrochanteric breadth	1.	(009) _ . . . _	
2. Elbow breadth	2.	(001) RIGHT SIDE _ . . . _	(002) LEFT SIDE _ . . . _
3. Upper arm girth	3.	(003) RIGHT SIDE _ . . . _	(004) LEFT SIDE _ . . . _
Chest circumference			
4a. Full expiration	4a.	(018) _ . . . . _	
b. Full inspiration	b.	(017) _ . . . . _	
5. Triceps skinfold (mm.)	5.	(005) RIGHT SIDE _ . . . _	(006) LEFT SIDE _ . . . _
6. Subscapular skinfold (mm.)	6.	(007) RIGHT SIDE _ . . . _	(008) LEFT SIDE _ . . . _
7. Sitting height	7.	(010) _ . . . _	
8. Is examinee right or left handed?	8.	(016) 1 <input type="checkbox"/> Right handed 2 <input type="checkbox"/> Left handed 3 <input type="checkbox"/> Uses both hands about the same 4 <input type="checkbox"/> Not sure 5 <input type="checkbox"/> Not applicable	
9. Weight (lbs.)	9.	(013) _ . . . . _	
10a. Standing height (cm.)	10a.	(014) _ . . . . _	
b. Standing height (inches)	b.	_ _ _ /	

**NOTES**

Sample Number
<b>Nº 00746</b>

Figure 1. Recording form for anthropometric measurements

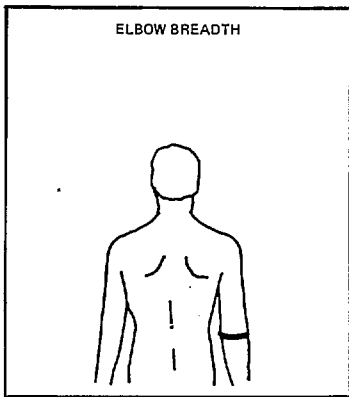
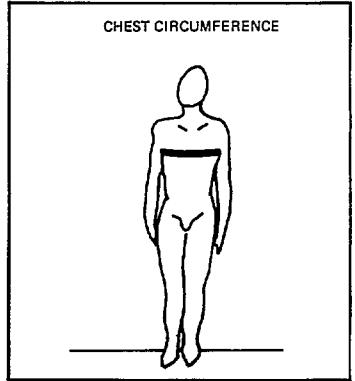
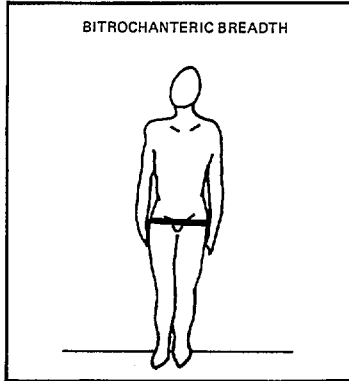
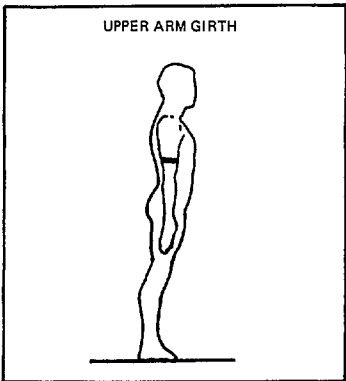
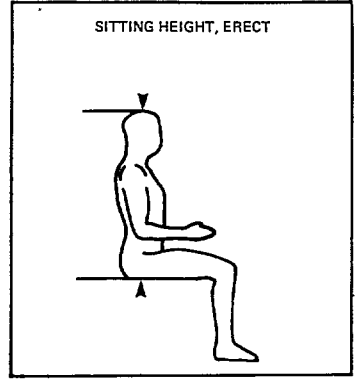
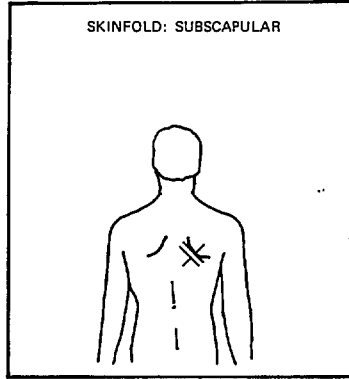
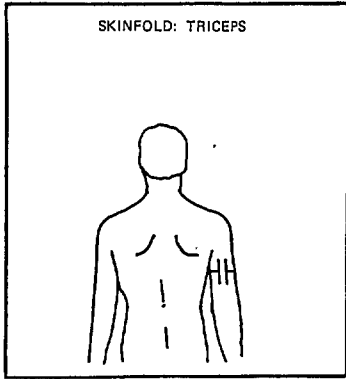


Figure II. Diagrams of anthropometric measurements

*B. Full inspiration.*—The examinee was asked to take in a “great big deep breath” for the measurement to be made.

*Triceps skinfold.*—With the examinee’s arm hanging freely at his side the skinfold caliper measured the thickness of a fold of skin plus subcutaneous tissue, but no muscle, taken over the right midtriceps at the level previously marked. The crest of the fold was parallel to the long axis of the arm. The calipers were applied about 1 cm below the thumb and forefinger.

*Subscapular skinfold.*—The thickness of a fold of skin taken just below the angle of the right scapula (shoulder and arm relaxed) was measured. The fold was parallel to natural cleavage lines of the skin—often a line 45 degrees from the horizontal extending medially upward.

*Sitting height (2 years and over).*—The examinee sat erectly on the measuring table with his eyes straight ahead and the infra-orbital meatal line parallel to the table top. Sitting as far back as possible with feet on the appropriate step of the stool so that the thighs were horizontal with the popliteal fossa at the table edge, the movable caliper arm was brought down firmly against the midline of the examinee’s head.

## Goniometry

Below is a complete description of the procedures of the goniometric examination.

### *Extension of hip (Figure III)*

1. Have the examinee lie on his stomach with both hips firmly resting on the table.
2. Ask him to lift his entire near leg as high as he can without bending his knee or lifting either hip off the table.
3. Have him relax and then repeat the procedure.

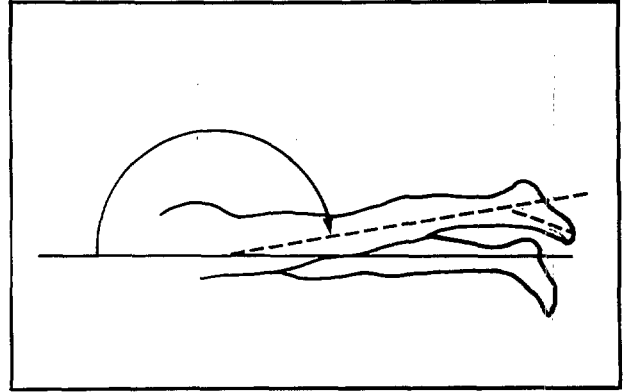


Figure III. Diagram of extension of hip.

4. Place the stationary arm of the goniometer alongside and parallel to the long axis of the trunk and the movable arm along the lateral midline of the near femur with the pivot point over the greater trochanter.
5. Take the measurement, which should normally be an angle between  $180^{\circ}$  and  $160^{\circ}$

### *Flexion of hip (Figure IV)*

1. Have the examinee lie on his back with the knee on the side being measured flexed and the opposite knee and hip straight and flat on the table.
2. Have him bring his knee as far up toward his chest as possible.

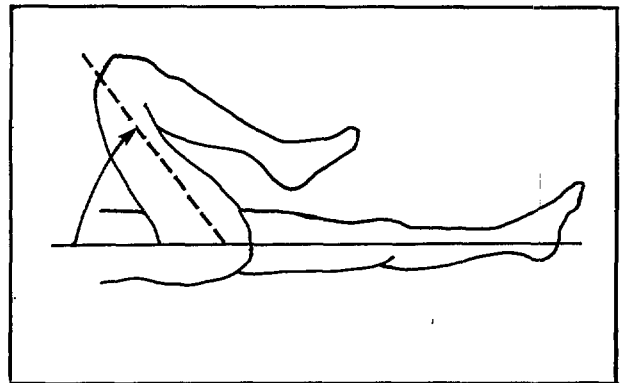


Figure IV. Diagram of flexion of hip



3. Have him relax the leg and then repeat the procedure.
4. Place the stationary arm of the goniometer alongside and parallel to the long axis of the trunk and the movable arm along the lateral midline of the femur with the pivot point over the greater trochanter.
5. Take the measurement, which should normally be an angle between  $180^{\circ}$  and  $55^{\circ}$ .

*Abduction and adduction of hip (Figure V)*

1. Have the examinee lie on his back with both legs straight and together. The adduction of the hip is normally an observed measure of zero degrees. (If it isn't, then measure and record the correct angle of adduction. Subtract the angle from  $180^{\circ}$  and record it as a two-digit number.)
2. Tell the examinee that you are going to carry the weight of his leg while he relaxes and moves his leg as far sideways as possible.
3. While you are holding his leg with the knee straight, have the examinee move his leg out to the side.

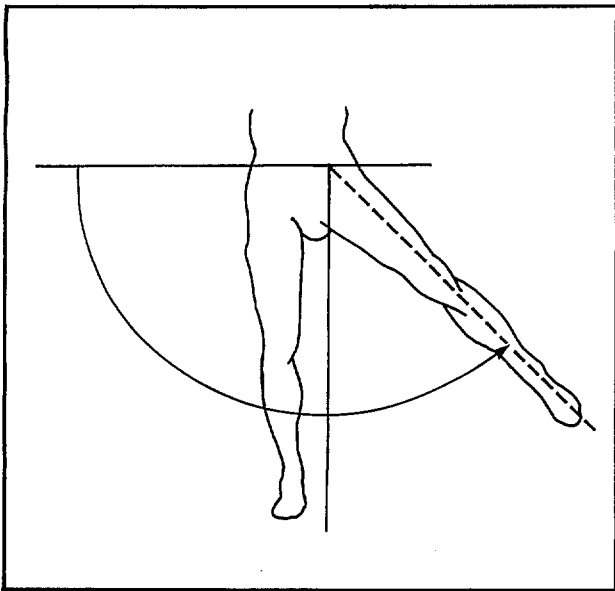


Figure V. Diagram of abduction and adduction of hip

4. Have him relax and repeat the procedure while putting one finger on each of his anterior superior iliac spines.
5. Place the stationary arm of the goniometer across the pelvic area along the line between the anterior superior iliac spines with the pivot point over the anterior superior iliac spines of the leg being measured.
6. Place the movable arm along the anterior midline of the femur and measure the abduction of the hip.
7. Read and record the obtuse angle between the arms of the goniometer. This angle should be between  $90^{\circ}$  and  $140^{\circ}$ .

*Internal and external rotation of hip (Figure VI)*

1. Have the examinee sit with his legs over the side of the table and knees flexed to 90 degrees.
2. Making sure he does not raise his hips from the table, have him swing one leg and then the other to the inside as far as he can and then to the outside as far as he can.
3. Have him relax and repeat the procedure while you measure.

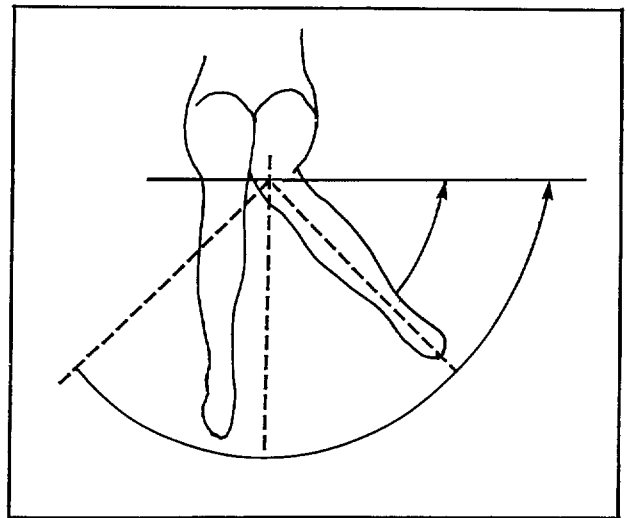


Figure VI. Diagram of internal and external rotation of hip

4. Place the stationary arm in your right hand and hold it parallel to the table top.
5. With the anterior aspect of the knee as a pivot point and with the movable arm of the goniometer along the anterior tibial crest, follow the leg in and take the measurement of internal rotation.
6. Follow the leg out and take the measurement of external rotation.
7. For the measurements of external rotation of the right hip and internal rotation of the left hip, the angle should be between  $90^{\circ}$  and about  $140^{\circ}$ .
8. For the measurements of external rotation of the left hip and internal rotation of the right hip, the angle should be between about  $40^{\circ}$  and  $90^{\circ}$ .

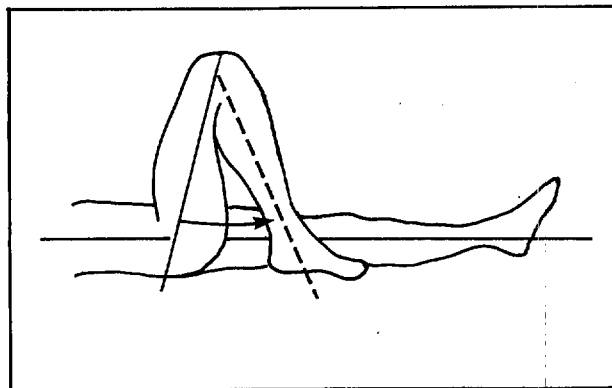


Figure VII. Diagram of extension and flexion of knee

*Extension and flexion of knee* (Figure VII)

1. Have the examinee lie on his back with legs extended. The extension of the knee is normally an observed measure of zero degrees with the back of the knee flat on the table. (If not, then measure and record the correct angle of the knee while the leg is extended as fully as possible. Subtract the angle from  $180^{\circ}$  and record it as a two-digit number.)
2. Have the examinee flex his knee, tightening it as much as possible while still keeping his foot flat on the table.
3. Have him relax and repeat the procedure while you measure.
4. Place the stationary arm parallel to the femur on a line from the lateral condyle to the greater trochanter with the pivot point over the distal lateral condyle of the femur.
5. Place the movable arm parallel to the fibula in line with the lateral malleolus.
6. Take the measurement, which should be an angle between  $180^{\circ}$  and  $30^{\circ}$ .



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