Data from the
NATIONAL HEALTH SURVEY

Series 11
Number 219

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.

DHHS Publication No. (PHS) 81-1669

U.S. DEPARTMENT OF HEALTH AND HUMAN RESOURCES
Public Health Service
Office of the Health Research, Statistics and Technology
National Center for Health Statistics
Hyattsville, Md. April 1981

NATIONAL CENTER FOR HEALTH STATISTICS

DIVISION OF HEALTH EXAMINATION STATISTICS

DIVISION OF DATA SERVICES

COOPERATION OF THE U.S. BUREAU OF THE CENSUS

In accordance with specifications established by the National Center for Health Statistics, the Bureau of the Census, under a contractual agreement, participated in the design and selection of the sample, and carried out the first stage of the field interviewing and certain parts of the statistical processing.

Vital and Health Statistics-Series 11-No. 219

DHHS Publication No. (PHS) 81-1669
Library of Congress Catalog Card Number 80-607765

Library of Congress Cataloging in Publication Data

Main entry under title:

Basic data on anthropometry and angular measurements of the hip and knee joints, for selected groups 1-74 years of age, United States, 1971-1975.

(Vital and health statistics : Series 11, Data from the National Health Survey ; no. 219) (DHHS publication ; no. (PHS) 81-1669)

Includes bibliographical references.

Supt. of Docs. no.: HE 20.6209:11/219

1. Anthropometry—United States. 2. Hip joint. 3. Knee. I. Johnson, Clifford L. II. Series: United States. National Center for Health Statistics. Vital and health statistics : Series 11, Data from the National Health Survey, Data from the health examination survey ; no. 219. III. Series: United States. Dept. of Health and Human Services. DHHS publication ; no. (PHS) 81-1669.

RA407.3.A347 no. 219 [GN58.U5] 312'.0723s [573'.6]

ISBN 0-8406-0201-4

80-607765

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.

CONTENTS

LIST OF FIGURES

SYMBOLS

Data not available	- - -
Category not applicable	. . .
Quantity zero	-
Quantity more than 0 but less than 0.05	0.0
Figure does not meet standards of reliability or precision	*

Basic Data on Anthropometric Measurements and Angular Measurements of the Hip and Knee Joints For Selected Age Groups 1-74 Years of Age

Clifford L. Johnson, M.S.P.H., Robinson Fulwood, M.S.P.H., Sidney Abraham, and Janet D. Bryner, Division of Health Examination Statistics

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.[1,2]

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*[3] 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[4-8] 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,[9] 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[10-12] 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.[13] 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

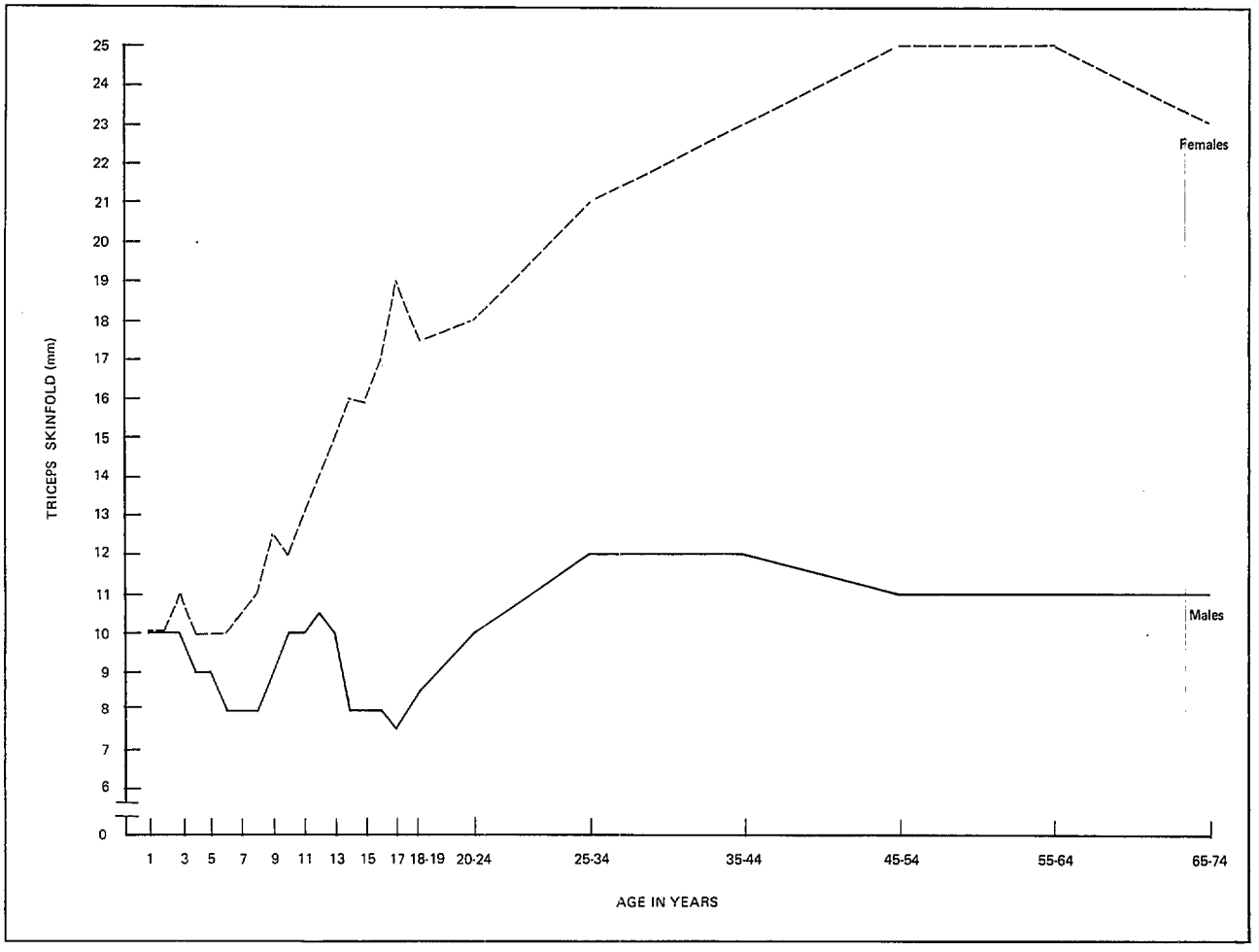

Figure 1. Median triceps skinfold for persons ages 1-74 years, by age and sex: United States, 1971-74

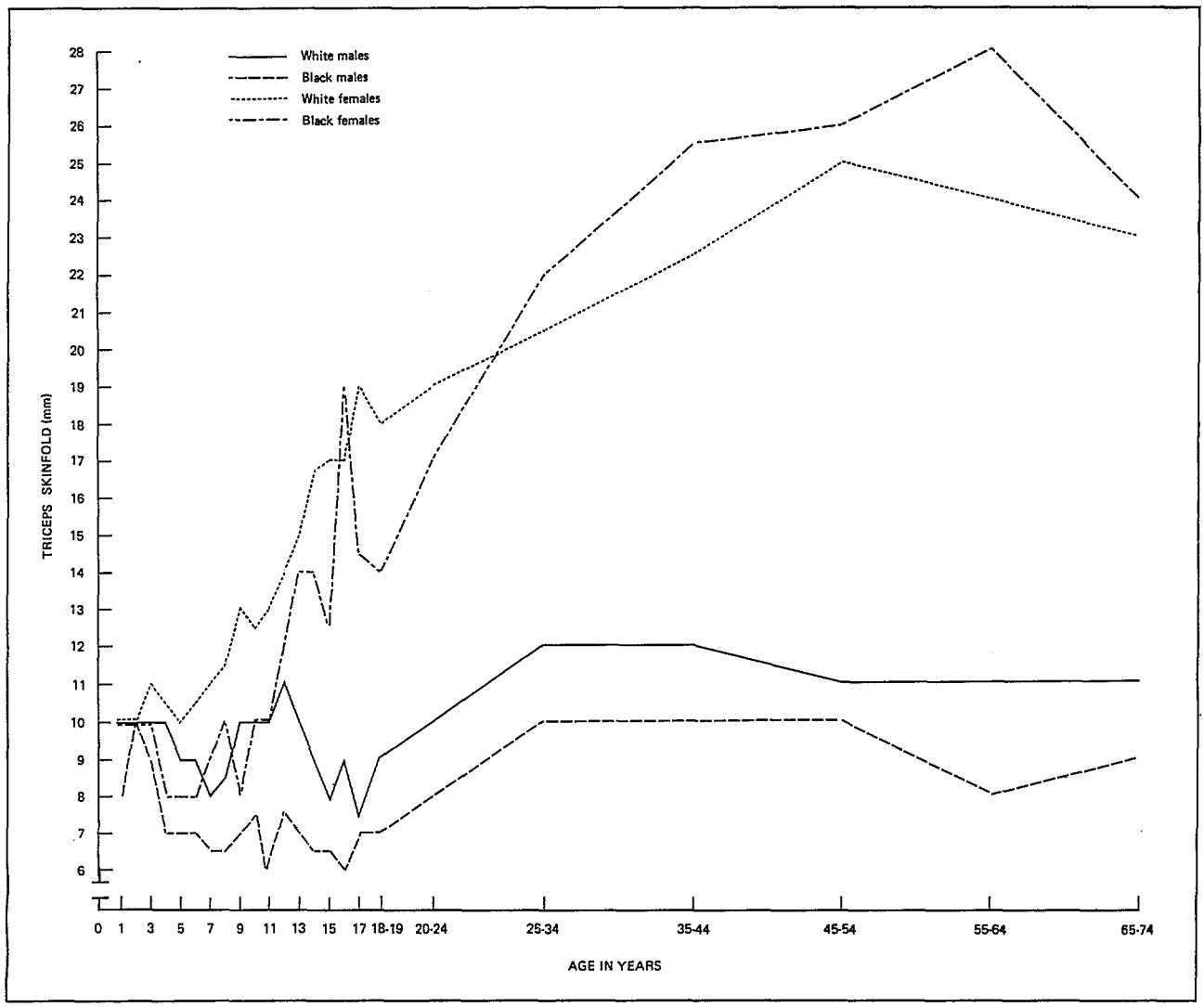

Figure 2. Median triceps skinfold for persons ages 1-74 years, by age, race, and sex: United States, 1971-74

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

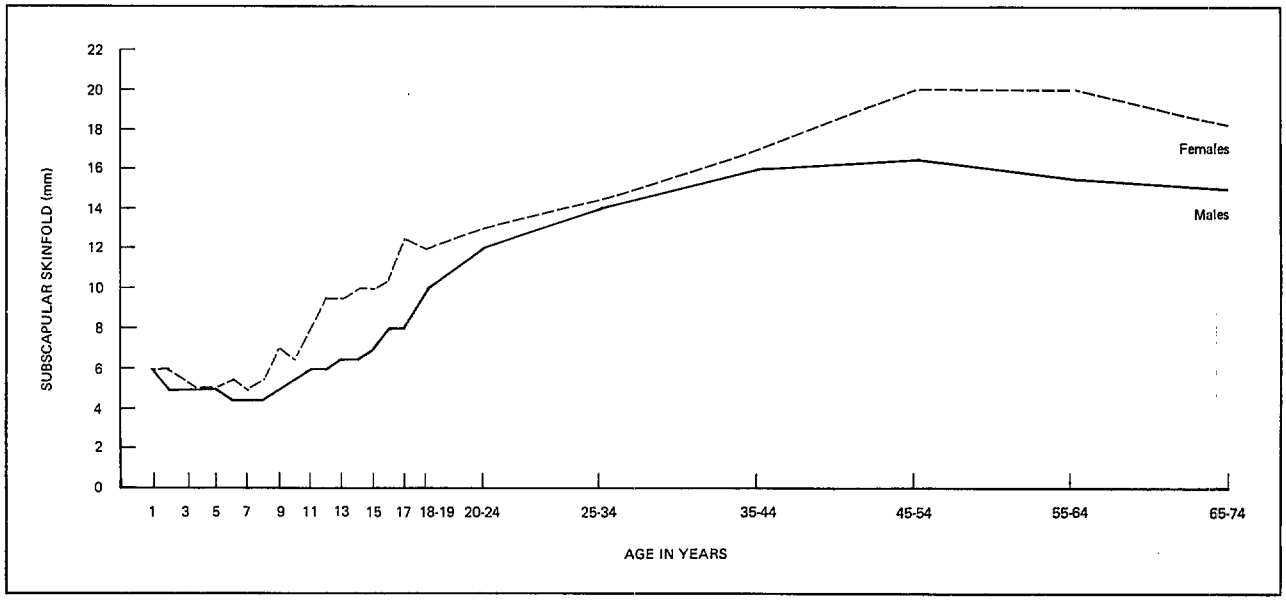

Figure 3. Median subscapular skinfold for persons ages 1-74 years, by age and sex: United States, 1971-74

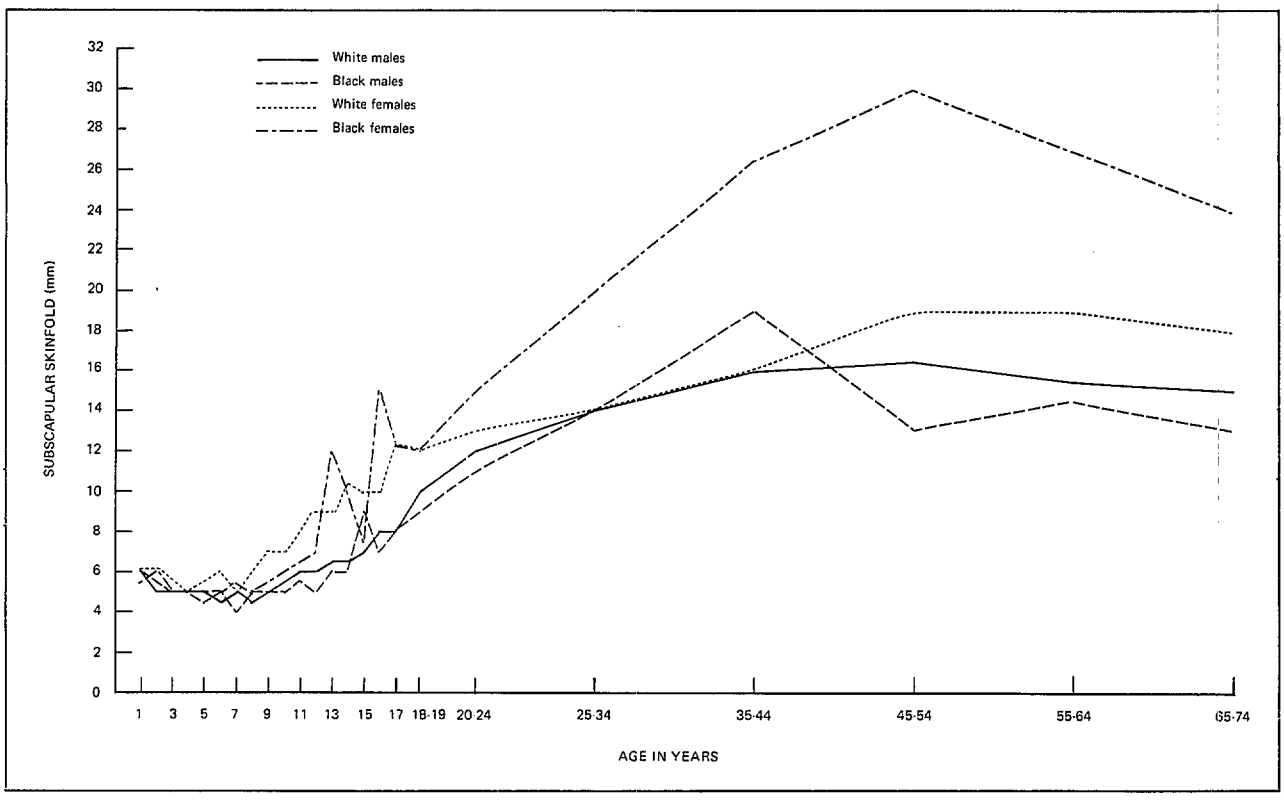

Figure 4. Median subscapular skinfold for persons ages 1-74 years, by age, race, and sex: United States, 1971-74

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.[8] 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.[14-15] 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.[16-19]

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

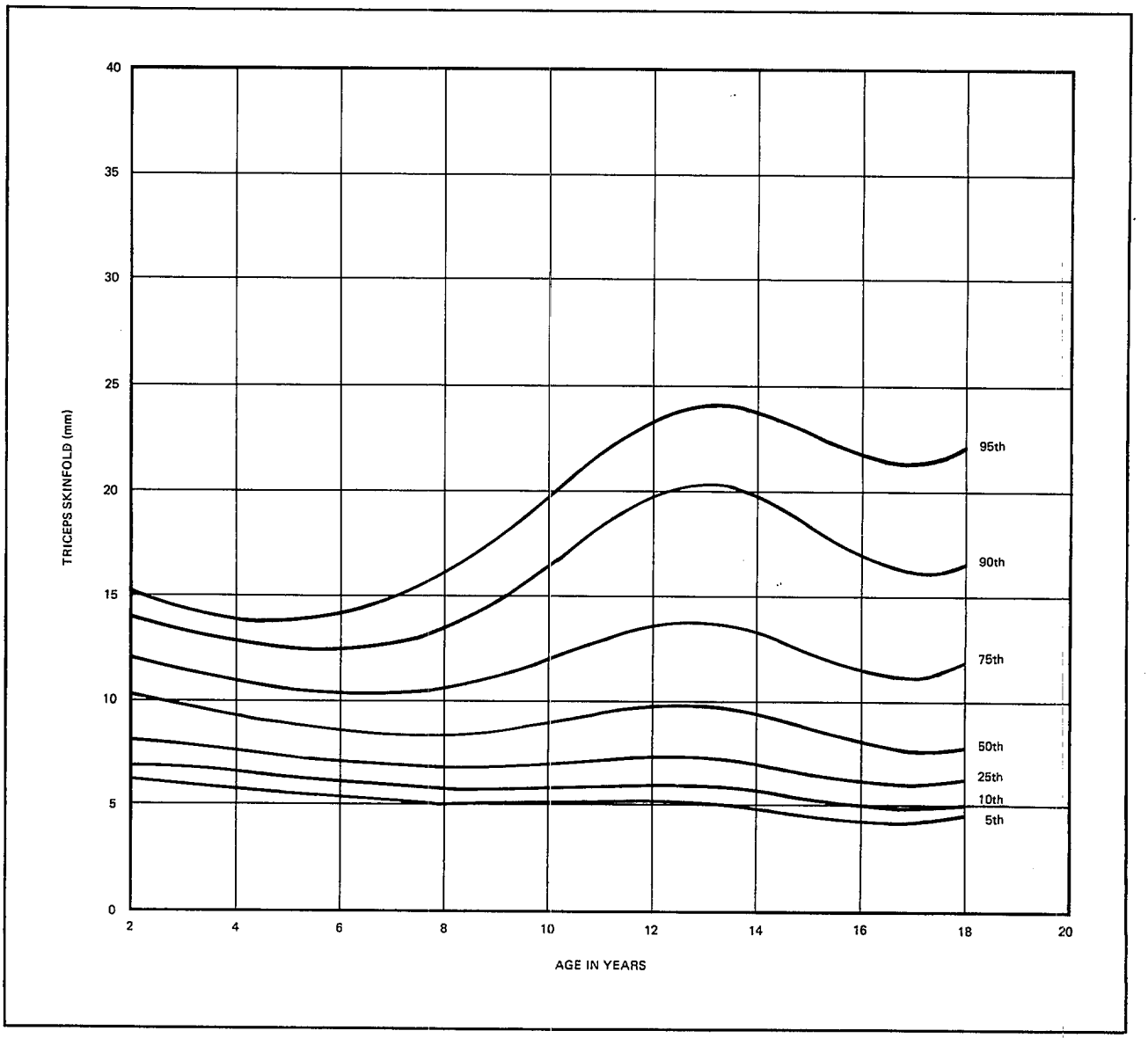

Figure 5. Smoothed percentiles of triceps skinfold for boys ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

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, chronologic age, race, and socioeconomic status are found. These differences in relative fatness re-

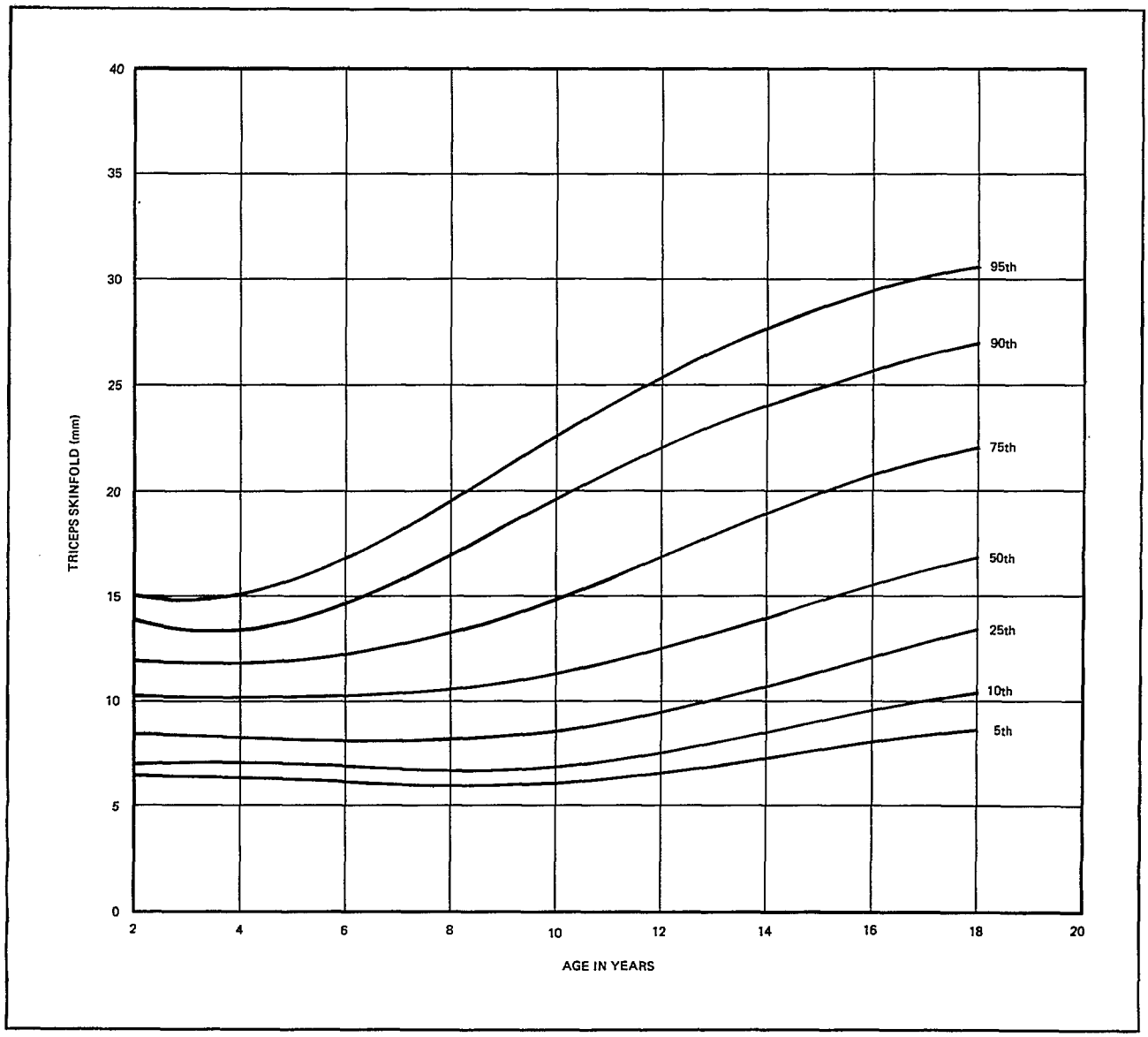

Figure 6. Smoothed percentiles of triceps skinfold for girls ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

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 extending 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

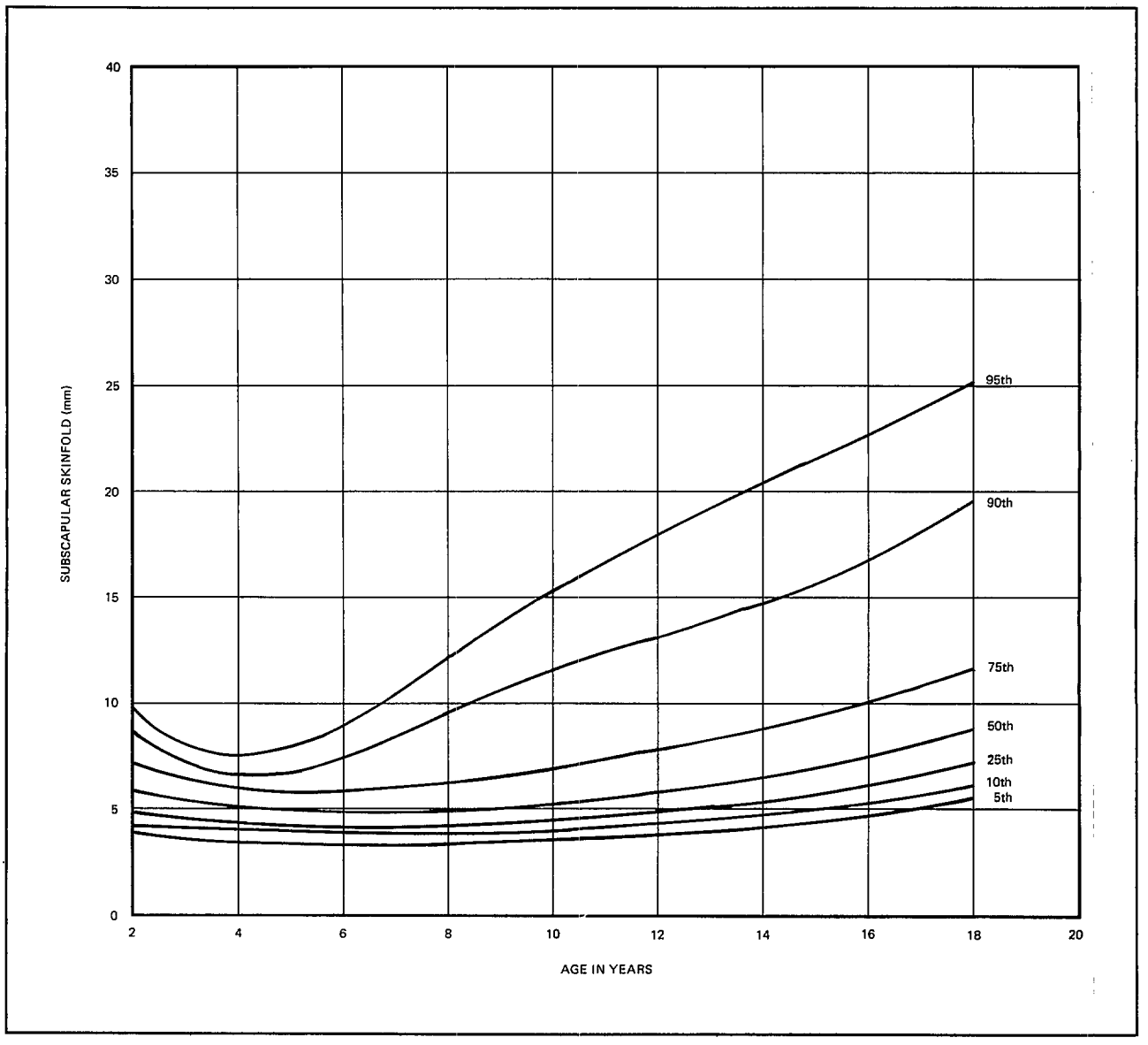

Figure 7. Smoothed percentiles of subscapular skinfold for boys ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

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

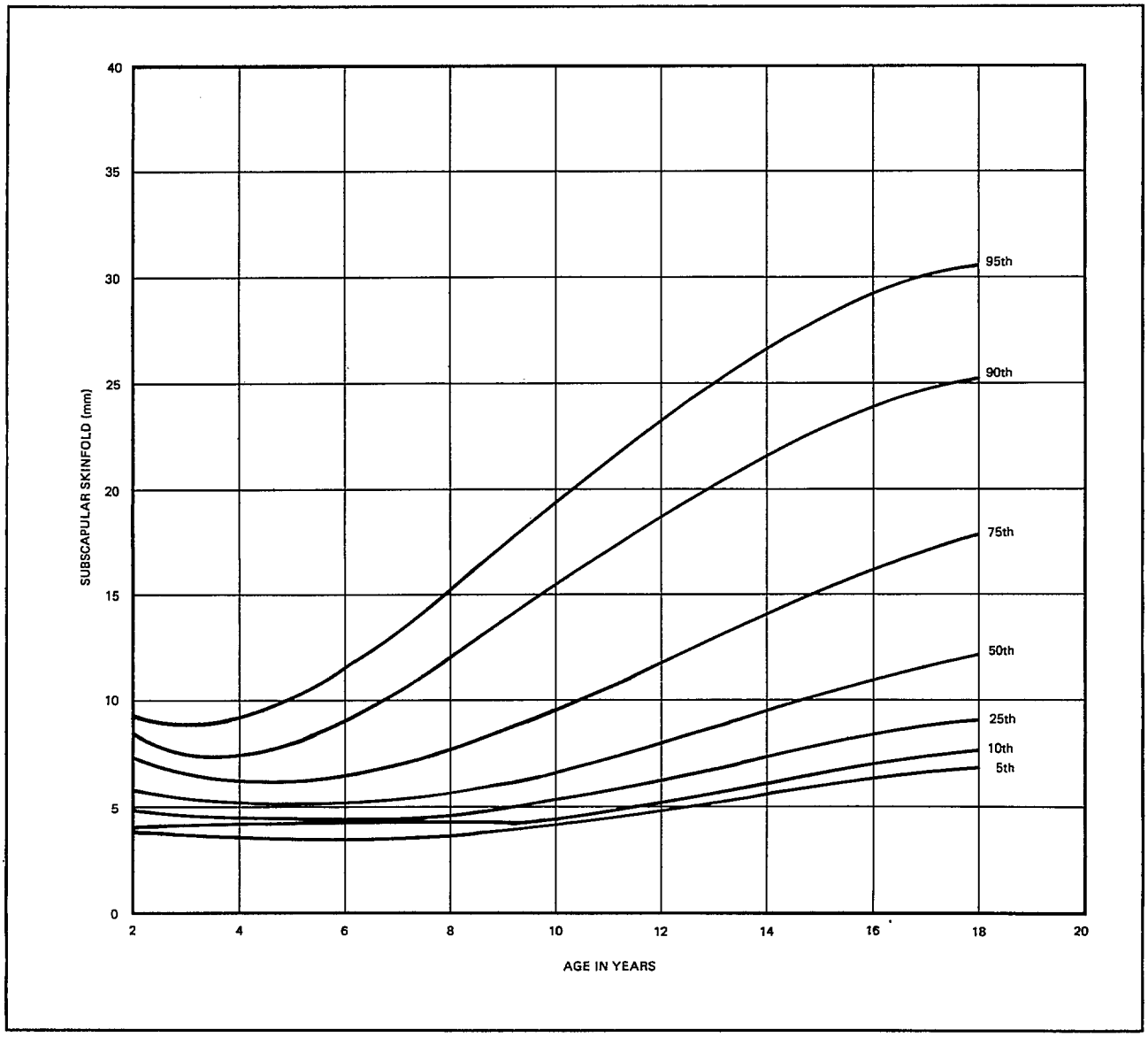

Figure 8. Smoothed percentiles of subscapular skinfold for girls ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

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.

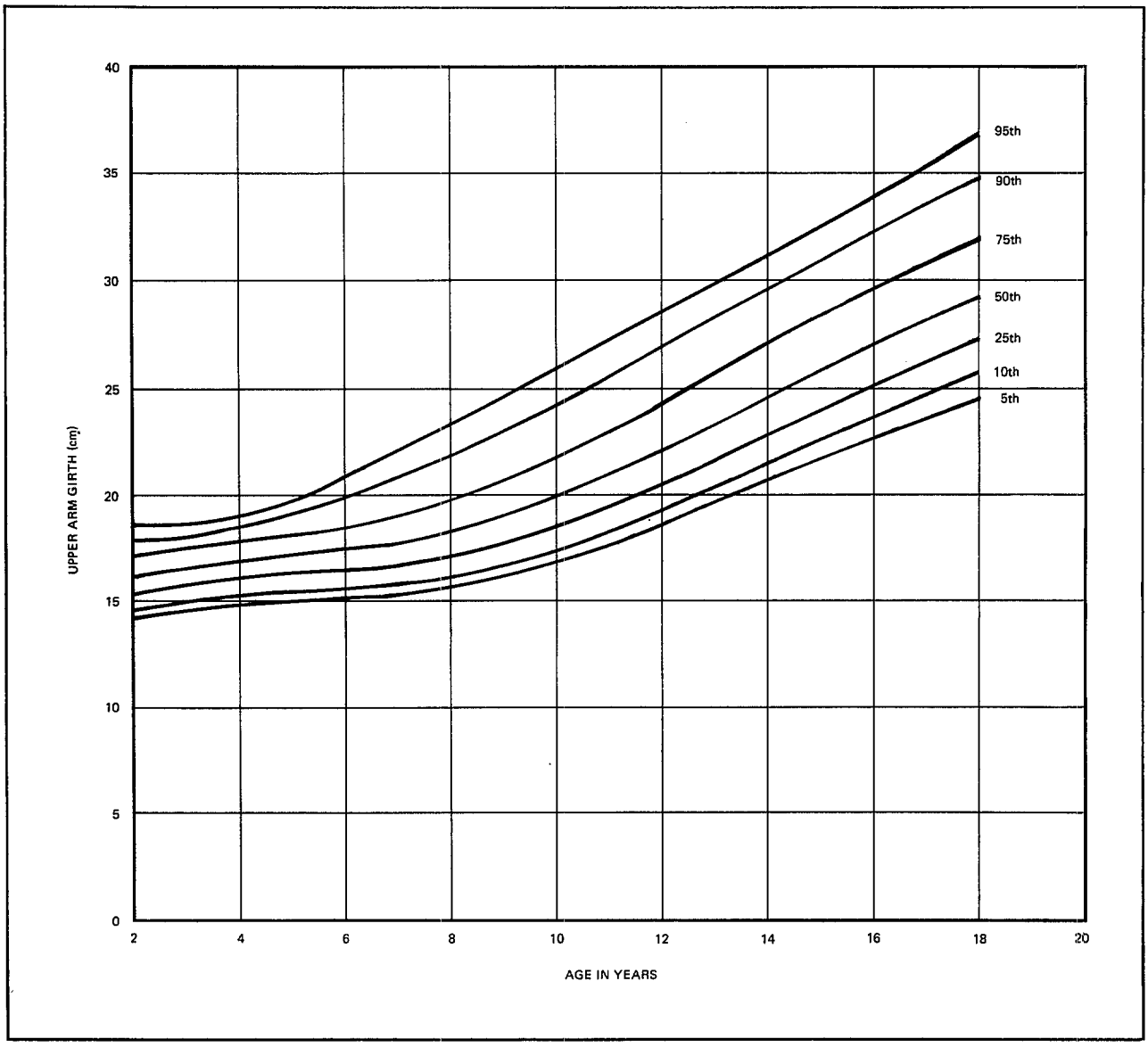

Figure 9. Smoothed percentiles of upper arm girth for boys ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

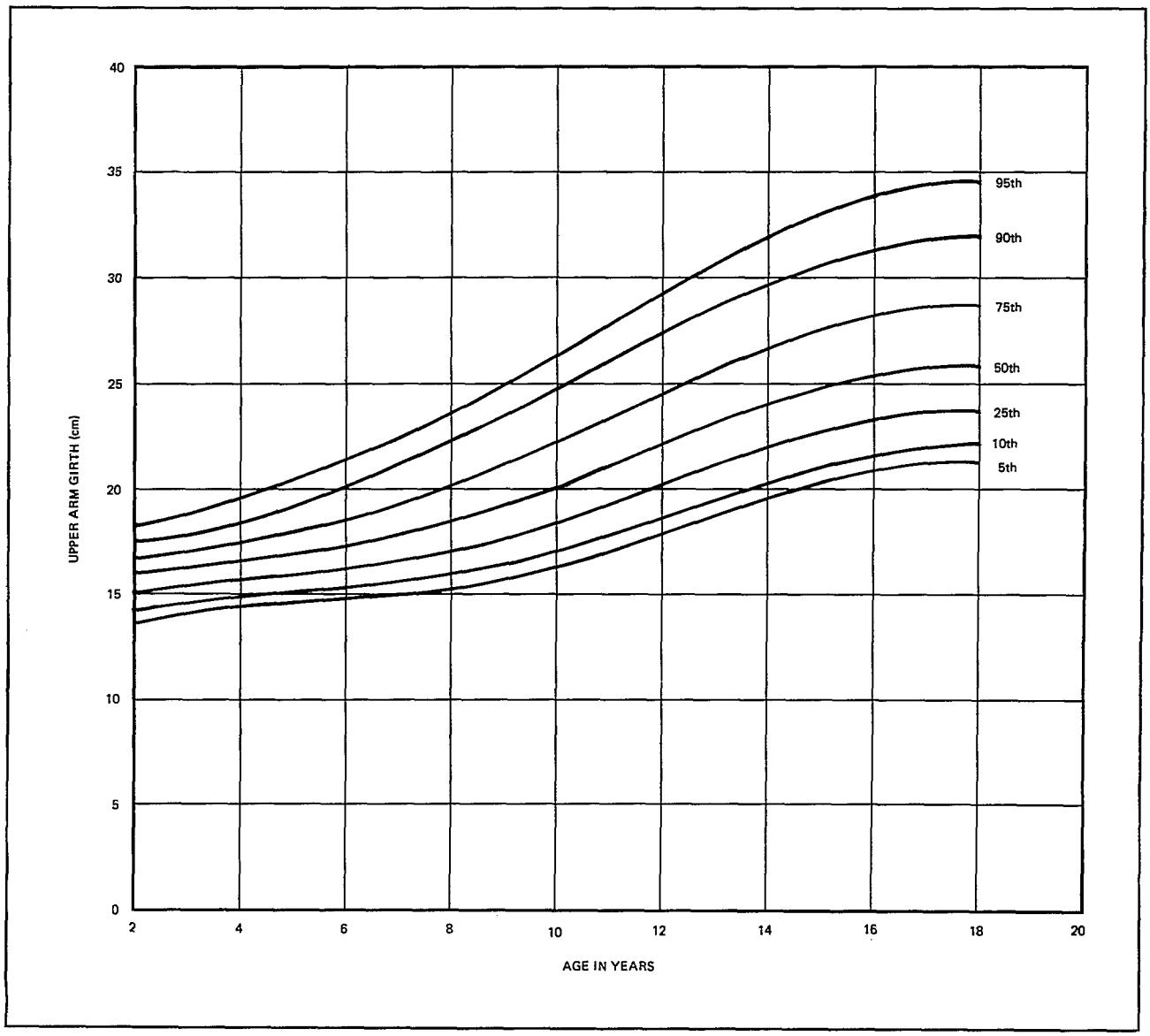

Figure 10. Smoothed percentiles of upper arm girth for girls ages 2-18 years, by age: United States, 1963-65, 1966-70, and 1971-74

REFERENCES

[1]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.

[2]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.

[3]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.

[4]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.

[5]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.

[6]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.

[7]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.

[8]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.

[9]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.

[10]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.

[11]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.

[12]Malina, R. M.: Quantification of fat, muscle, and bone in man. *Clin. Orthop.* 65:9-38, July-Aug. 1969.

[13]Weiner, J. S., and Lourie, J. A. (eds.): Human Biology, A Guide to Field Methods. IBP Handbook No. 9. Oxford. Blackwell, 1969.

[14]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.

[15]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.

[16]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.

[17]Weil, W. B., Jr.: Current controversies in childhood obesity. *J. Pediatr.* 91(2):178-187, Aug. 1977.

[18]Roche, A. F.: Postnatal growth of adipose tissue in man. *J. Stud. Phys. Anthropol.* (Warsaw) 5:53-73, 1979.

[19]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.

[20]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.

LIST OF DETAILED TABLES

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
ALL RACES[1]			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
WHITE													
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	11.1	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	12.5	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
BLACK													
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

[1]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
ALL RACES[1]			TRICEPS SKINFOLD IN MILLIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			TRICEPS SKINFOLD IN MILLIMETERS										
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
WHITE[2]													
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
BLACK													
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

[1]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
ALL RACES[1]			TRICEPS SKINFOLD IN MILLIMETERS										
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
WHITE													
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	3,159	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
BLACK													
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

[1]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
			SUBSCAPULAR SKINFOLD IN MILLIMETERS										
ALL RACES[1]													
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
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
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
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
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
6 YEARS	179	1,673	5.1	2.4	3.0	3.0	3.5	4.0	4.5	5.0	6.0	7.0	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
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 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
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
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
12 YEARS	200	2,304	8.0	6.0	3.5	4.0	4.5	5.0	6.0	9.0	11.0	14.0	20.5
13 YEARS	174	1,978	8.8	6.9	3.5	4.0	4.5	5.0	6.5	9.0	13.5	17.0	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
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
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
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
WHITE													
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
BLACK													
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
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
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
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
5 YEARS	64	226	5.1	2.5	2.5	3.0	3.0	4.0	4.5	5.0	7.0	7.0	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 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
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 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
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
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 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
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
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
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
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
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

[1]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
ALL RACES[1]			SUBSCAPULAR SKINFOLD IN MILLIMETERS										
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	1,599	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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			SUBSCAPULAR SKINFOLD IN MILLIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			SUBSCAPULAR SKINFOLD IN MILLIMETERS										
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	19.0	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	19.5	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
WHITE													
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	3,159	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
BLACK													
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

[1]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
ALL RACES[1]			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	152	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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			UPPER ARM GIRTH IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			UPPER ARM GIRTH IN CENTIMETERS										
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	26.1	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.....	4,734	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

[1]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
ALL RACES[1]			UPPER ARM GIRTH IN CENTIMETERS										
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

[1]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
ALL RACES[1]			ELBOW BREADTH IN CENTIMETERS										
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	4.9	5.0	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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			ELBOW BREADTH IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			ELBOW BREADTH IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			ELBOW BREADTH IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			SITTING HEIGHT IN CENTIMETERS										
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
WHITE													
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	3.6	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
BLACK													
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

[1] INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2] 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
ALL RACES[1]			SITTING HEIGHT IN CENTIMETERS										
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	87.7
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	88.8
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
WHITE													
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
BLACK													
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

[1] INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2] 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
ALL RACES[1]			SITTING HEIGHT IN CENTIMETERS										
18-74 YEARS...	5,261	61,180	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
WHITE													
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	3.8	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
BLACK													
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

[1]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
ALL RACES[1]			SITTING HEIGHT IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			BITROCHANTERIC BREADTH IN CENTIMETERS										
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	26.0	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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			BITROCHANTERIC BREADTH IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
ALL RACES[1]			BITROCHANTERIC BREADTH IN CENTIMETERS										
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
WHITE													
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
55-74 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
BLACK													
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

[1]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
ALL RACES[1]			BITROCHANTERIC BREADTH IN CENTIMETERS										
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
WHITE													
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
BLACK													
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

[1]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
			CHEST CIRCUMFERENCE IN CENTIMETERS										
MALE													
ALL RACES[1]													
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
WHITE													
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
BLACK													
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
FEMALE													
ALL RACES[1]													
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
WHITE													
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
BLACK													
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

[1]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
			CHEST CIRCUMFERENCE IN CENTIMETERS AT FULL EXPIRATION										
MALE													
ALL RACES[1]													
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
WHITE													
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
BLACK													
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
FEMALE													
ALL RACES[1]													
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
WHITE													
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
BLACK													
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

[1] 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
			CHEST CIRCUMFERENCE IN CENTIMETERS AT FULL INSPIRATION										
MALE													
ALL RACES[1]													
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
WHITE													
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
BLACK													
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
FEMALE													
ALL RACES[1]													
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
WHITE													
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
BLACK													
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

[1] INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.

TABLE 28. NUMBER OF PERSONS AGES 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[1]	MEAN	STANDARD DEVIATION	PERCENTILE						
					5TH	10TH	25TH	50TH	75TH	90TH	95TH
MALE			UPPER ARM GIRTH IN CENTIMETERS								
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
FEMALE											
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

[1]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[1]	MEAN	STANDARD DEVIATION	PERCENTILE						
					5TH	10TH	25TH	50TH	75TH	90TH	95TH
			TRICEPS SKINFOLD IN MILLIMETERS								
MALE											
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	839	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
FEMALE											
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

[1]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[1]	MEAN	STANDARD DEVIATION	PERCENTILE						
					5TH	10TH	25TH	50TH	75TH	90TH	95TH
					SUBSCAPULAR SKINFOLD IN MILLIMETERS						
MALE											
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
FEMALE											
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

[1]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[1] percentile						
	5th	10th	25th	50th	75th	90th	95th
	Upper arm girth in centimeters						
Male							
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
Female							
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

[1]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[1] percentile						
	5th	10th	25th	50th	75th	90th	95th
	Triceps skinfold in millimeters						
Male							
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
Female							
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

[1]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[1] percentile						
	5th	10th	25th	50th	75th	90th	95th
	Subscapular skinfold in millimeters						
Male							
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
Female							
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

[1]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]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[1]	SEX		RACE		AGE IN YEARS				
		MALE	FEMALE	WHITE	BLACK	25-34	35-44	45-54	55-64	65-74
	PERCENT DISTRIBUTION									
TOTAL[2]	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

[1]INCLUDES DATA FOR RACES WHICH ARE NOT SHOWN SEPARATELY.
[2]MEASUREMENTS TAKEN IN INTERVALS OF 5 DEGREES.

APPENDIXES

CONTENTS

LIST OF APPENDIX FIGURES

LIST OF APPENDIX TABLES

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 calender 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[1] and supplemented in Series 1, No. 14.[2]

Because the design of NHANES I is a multistage 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.

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					
			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	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	563	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	1,734
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					
			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	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					
			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	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 μ is computed as follows:

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

where x_i is the observation or measurement on the ith 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."[20]

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 sample 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:

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

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

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

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.

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
Right hip										
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
Left hip										
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:

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

and

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

thus, the estimated variances are

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

and

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

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

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

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
Right hip										
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
Left hip										
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
External rotation of right hip										
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
Internal rotation of left hip										
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
Internal rotation of right hip										
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
External rotation of left hip										
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
Right hip										
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
Left hip										
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
Right knee										
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
Left knee										
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."

———— ooo ————

APPENDIX III

DATA TAPE SUMMARY

ANTHROPOMETRIC AND GONIOMETRIC DATA TAPE—NHANES I

SITTING ON TABLE

——— ooo ———

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[a] 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.

[a]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.

HRA-12-7A (Formerly HSM-425-7A)
7-74

Form Approved
O.M.B. No. 68-R1184

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. Examiner No.	c. Recorder No.
111	__ __	

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) __ __ . __	
When both sides are measured 8. Is examinee right or left handed?	8.	(016) 1 ☐ Right handed 2 ☐ Left handed 3 ☐ Uses both hands about the same 4 ☐ Not sure 8 ☐ Not applicable	
9. Weight (lbs.)	9.	(013) __ __ __ . __ __	
10a. Standing height (cm.)	10a.	(014) __ __ __ . __	
b. Standing height (inches)	b.	__ __ /__	

NOTES

Sample Number

Nº 00746

Figure I. Recording form for anthropometric measurements

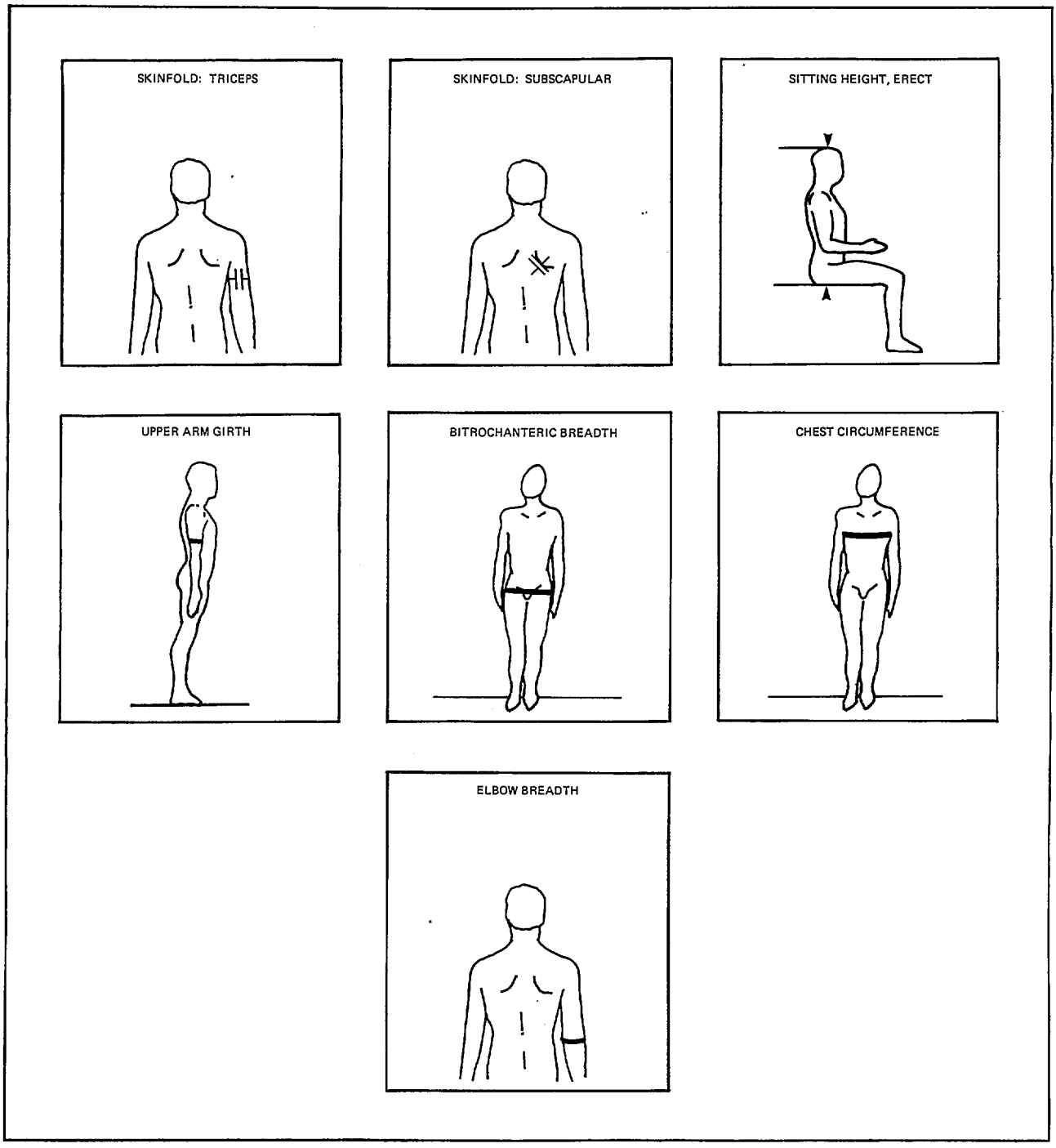

Figure II. Diagrams of anthropometric measurements

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 infraorbital 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.

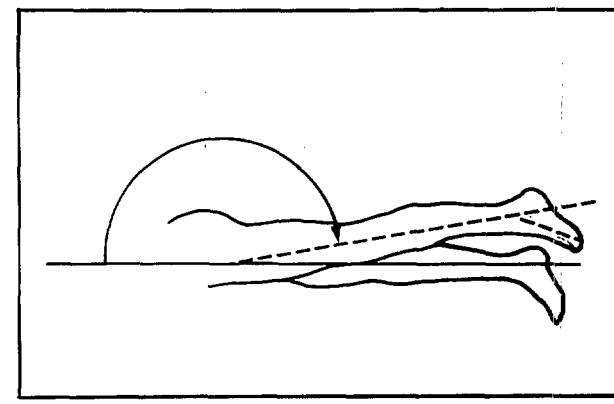

Figure III. Diagram of extension of hip.

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° and 160°

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.

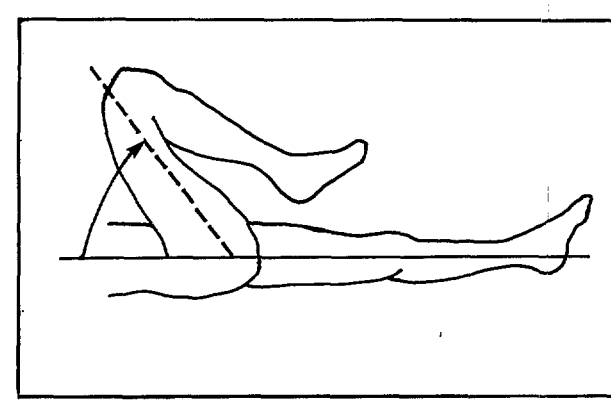

Figure IV. Diagram of flexion of hip

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° and 55°.

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° 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.

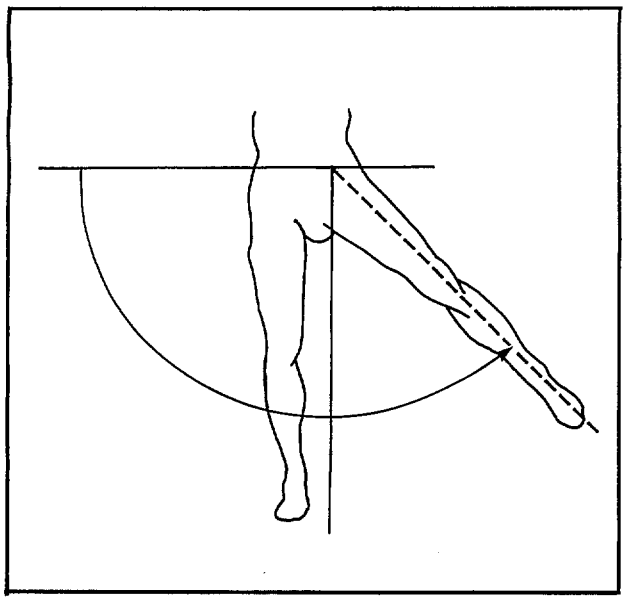

Figure V. Diagram of abduction and adduction of hip

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° and 140°.

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.

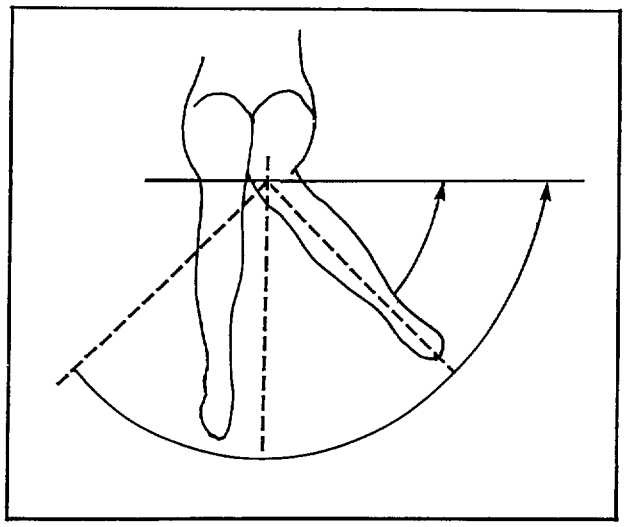

Figure VI. Diagram of internal and external rotation of hip

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° and about 140°.
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° and 90°.

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° and record it as a two-digit number.)

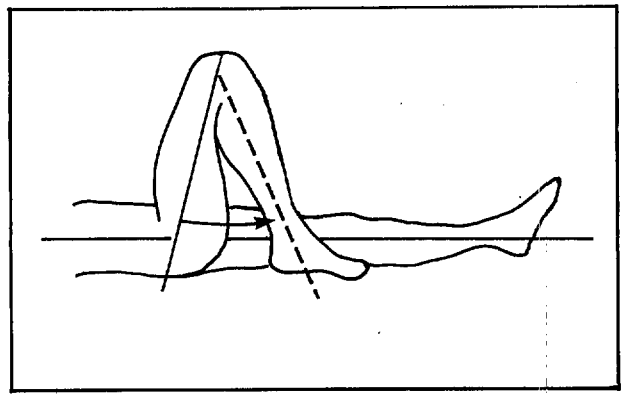

Figure VII. Diagram of extension and flexion of knee

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° and 30°.

———— ooo ————

VITAL AND HEALTH STATISTICS Series

Series 1. Programs and Collection Procedures.—Reports which describe the general programs of the National Center for Health Statistics and its offices and divisions and data collection methods used and include definitions and other material necessary for understanding the data.

Series 2. Data Evaluation and Methods Research.—Studies of new statistical methodology including experimental tests of new survey methods, studies of vital statistics collection methods, new analytical techniques, objective evaluations of reliability of collected data, and contributions to statistical theory.

Series 3. Analytical Studies.—Reports presenting analytical or interpretive studies based on vital and health statistics, carrying the analysis further than the expository types of reports in the other series.

Series 4. Documents and Committee Reports.—Final reports of major committees concerned with vital and health statistics and documents such as recommended model vital registration laws and revised birth and death certificates.

Series 10. Data From the Health Interview Survey.—Statistics on illness, accidental injuries, disability, use of hospital, medical, dental, and other services, and other health-related topics, all based on data collected in a continuing national household interview survey.

Series 11. Data From the Health Examination Survey and the Health and Nutrition Examination Survey.—Data from direct examination, testing, and measurement of national samples of the civilian noninstitutionalized population provide the basis for two types of reports: (1) estimates of the medically defined prevalence of specific diseases in the United States and the distributions of the population with respect to physical, physiological, and psychological characteristics and (2) analysis of relationships among the various measurements without reference to an explicit finite universe of persons.

Series 12. Data From the Institutionalized Population Surveys.—Discontinued effective 1975. Future reports from these surveys will be in Series 13.

Series 13. Data on Health Resources Utilization.—Statistics on the utilization of health manpower and facilities providing long-term care, ambulatory care, hospital care, and family planning services.

Series 14. Data on Health Resources: Manpower and Facilities.—Statistics on the numbers, geographic distribution, and characteristics of health resources including physicians, dentists, nurses, other health occupations, hospitals, nursing homes, and outpatient facilities.

Series 20. Data on Mortality.—Various statistics on mortality other than as included in regular annual or monthly reports. Special analyses by cause of death, age, and other demographic variables; geographic and time series analyses; and statistics on characteristics of deaths not available from the vital records based on sample surveys of those records.

Series 21. Data on Natality, Marriage, and Divorce.—Various statistics on natality, marriage, and divorce other than as included in regular annual or monthly reports. Special analyses by demographic variables; geographic and time series analyses; studies of fertility; and statistics on characteristics of births not available from the vital records based on sample surveys of those records.

Series 22. Data From the National Mortality and Natality Surveys.—Discontinued effective 1975. Future reports from these sample surveys based on vital records will be included in Series 20 and 21, respectively.

Series 23. Data From the National Survey of Family Growth.—Statistics on fertility, family formation and dissolution, family planning, and related maternal and infant health topics derived from a biennial survey of a nationwide probability sample of ever-married women 15-44 years of age.

For a list of titles of reports published in these series, write to:

Scientific and Technical Information Branch
National Center for Health Statistics
Public Health Service
Hyattsville, Md. 20782

DHHS Publication No. (PHS) 81-1669
Series 11 No. 219

NCHS

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Health Research, Statistics, and Technology
National Center for Health Statistics
3700 East-West Highway
Hyattsville, Maryland 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

For listings of publications in the VITAL AND HEALTH STATISTICS series, call 301-436-NCHS.

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF H.H.S.
HHS 396