

Biology of the People of Jammu and Kashmir: Part II: Anthropometric Variables of Various Population Groups of the State: Selected Centiles

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ABSTRACT This paper presents detailed information on percentiles of anthropometric variables for various population groups of Jammu and Kashmir state of India. The centile tables are presented for the boys aged 8+ to 18+ years and for male adults of the three major population groups (Bodhs, Baltis and Dogras) of Jammu and Kashmir state. These tables for anthropometric measurements would be useful for future reference since no such tables are available in the literature so far. These percentiles are also useful in assessment of community health and monitoring the development process of various population groups of the state.

INTRODUCTION

The growth trend of a population is usually assessed by different methods. The most commonly used method is by providing means and standard deviation values. This method of assessment gives a good indication of just how a person stands in relation to the normal groups of that population. The limits determined by the means and 'Plus and Minus' one or more standard deviation are considered as normal limits. Assessment of growth by another method is by means of calculating percentiles. The order of percentile indicates the position which a measurement would hold in a typical series of 100 (one hundred per cent). Children whose weight and height measurements which fall in different percentile groups, shift percentile groups or lie near to or fall outside the 5th and 95th percentiles, are reviewed for growth abnormalities (ICMR, 1972).

There is often debate as to whether it is preferable to present growth standards in the form of centiles or as means 'plus' or 'minus' standard deviations. In terms of general clinical interpretation it makes little difference, but some authors feel that these are easier to explain to the subjects as they give a direct statement of probability (Preece, 1989). It is always recommended that a standard deviation should only be calculated if the underlying distribution of a variable is known to be Gaussian. For measurements such as weight and skinfold thickness, which are highly non Gaussian, the use of standard deviation is not acceptable without suitable transformations. The

standards in the form of centiles are always useful in assessment of community health or monitoring the progress in a population.

The present study was designed in order to furnish the growth standards in the form of centiles for various population groups of Jammu and Kashmir state. These centiles are presented for the boys aged 8+ to 18+ years and for male adults. These percentiles can be used to improve identification of potential problems related to health and nutrition, and to facilitate the comparison of one group of children to another.

MATERIAL AND METHODS

Details about the subjects, methodology involved and the results of various anthropometric measurements have already been presented in Part I of the paper (Bhasin et al., 2008a, b). This part of the paper attempts to furnish details information on percentiles for the aforesaid population groups.

RESULTS

In the present study, 5th, 10th, 25th, 50th, 75th, 90th and 95th centiles at each age level for all 23 anthropometric measurements are computed, so as to represent the standards of the population groups. The centiles have been presented for three population groups. Two significant groups from the Ladakh region - the Bodhs and Baltis - have been represented separately. The three Dogra sub groups (i.e. Brahmans, Rajputs and the Scheduled castes) have been pooled so as to

give reference standards of population groups of Jammu region separately. Since the number of subjects from the Tibetans and the Gujjar boys is too small to allow percentiles and to provide standard information, these two groups have been included in the process of centile computation. Table 1 to 3 represents the percentile standards of the three population groups. The 50th percentile values of height of Ladakhi Bodhs increase from 117.5 cm to 162.6 cm from 8+ to 18+ years respectively. The 50th percentile of adult height in Bodhs and Baltis is 165.8 cm and 164.2 cm respectively. It has been observed that there were small differences in growth percentiles between the two groups i.e. the Bodhs and Baltis. However, in Dogra boys the 50th percentile value in all age groups of Dogra boys are significantly higher as compared to Bodhs and Baltis.

When compared to ICMR (All India Pooled, 1972) data, the 50th percentile of height of Bodhs and Baltis fall below the 50th percentile values of All India standards in almost all the age groups (Fig 1). The median values of present boys fluctuate between 25th and 50th percentiles of ICMR. The peak height gain in the present boys appears to be achieved between 13+ and 14+ years, which corresponds with the ICMR data.

The 50th percentile values of height of Dogra boys in all age groups are higher as compared to ICMR data. Thus the Dogra boys are significantly taller than the All India pooled sample. The 50th percentile values of Dogra boys correspond with the 75th percentile of All India data. The median height achieved at 18+ years in Dogras is 168.5

cm as compared to 163.5 cm in their All India (pooled) peers.

The 50th percentile values of body weight of Bodhs increase from 20.5 kg to 48.7 kg from age group 8+ to 18+ years respectively. There are only very little inter group differences between three groups in pre-adolescent age groups. the 50th percentile values of body weight at 18+ years in Bodh boys are lower (48.7 kg) as compared to their Balti (52.0) and Dogra (52.0) groups counterparts.

When compared to all India pooled (ICMR) data, the 50th percentiles of body weight of Balti, Dogra and Bodhs are higher as compared to the 50th percentile values of All India values (Fig. 2). The 50th percentile values of Baltis are nearer to the 75th percentile values of All India data while 50th percentile of Dogra boys correspond with 25th percentile of all India data.

The 50th percentile values of sitting height increase from 64 cm to 85.0 cm in Bodhs, from 64.1 cm to 86.0 cm in Baltis and 65.0 to 86.8 cm from 8+ to 18+ years respectively in all the three groups. The inter group differences are not significant between various population groups of the state. The 50th percentile values of Bodhs and Baltis almost correspond with 50th percentile of All India data (Fig. 3). However Baltis have higher median values than their All India peers. The 50th percentile values of Dogra boys in most age groups are above 75th percentiles of All India pooled data. The 25th percentile of Dogras corresponds with the 50th percentile of All India data.

It is evident from the tables 1,2 and 3 that the

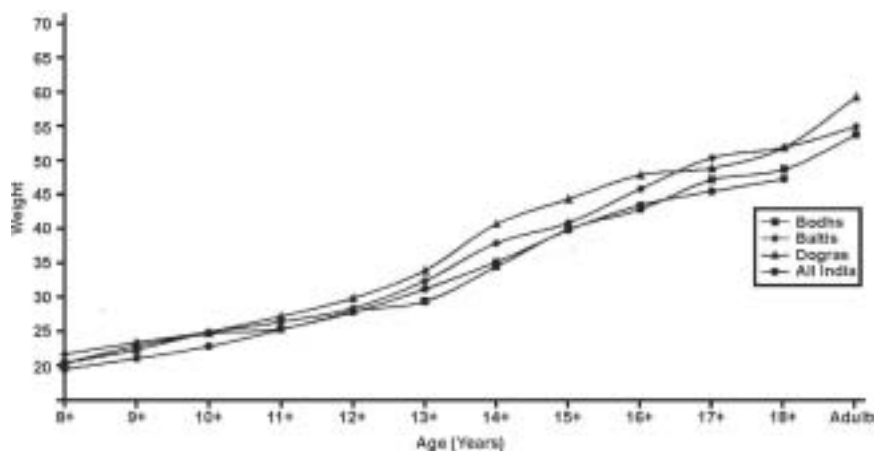


Fig. 1. Median Weight (kg) of the Bodha, Baltis and Dogra Boys compared with all India Pooled data (ICMR 1972)

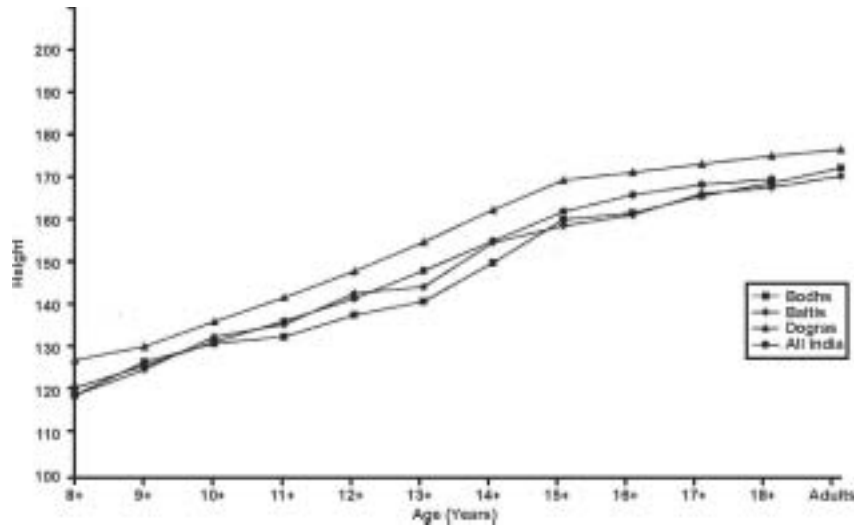


Fig. 2. Median Height of the Bodhs, Baltis and Dogra Boys compared with All India Pooled data (ICMR 1972)

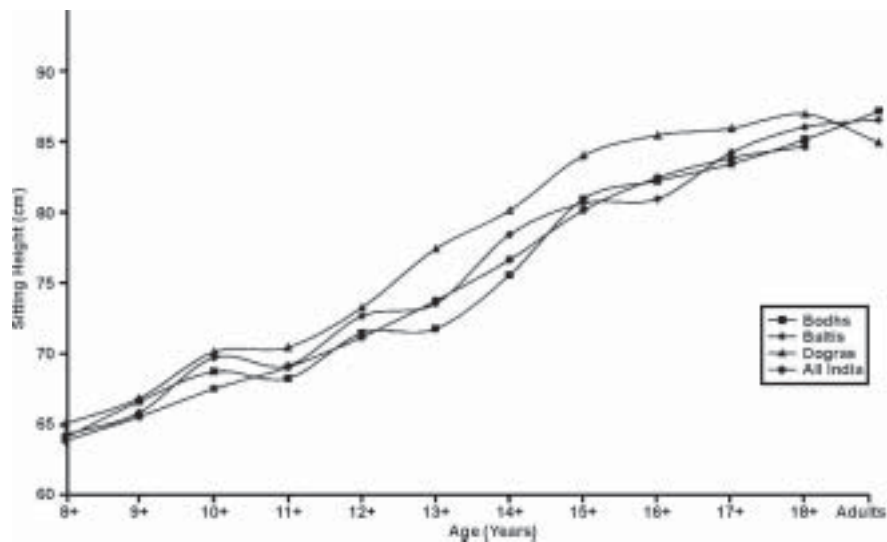


Fig. 3. Median sitting Height (cm) of the Bods, Baltis and Dogra Boys compared with All India Pooled data (ICMR 1972)

Baltis have the lowest and the Dogras have the highest 50th percentile values for the biacromial diameter. This trend is consistent in all percentile levels. Regarding bicristal diameter, the 50th percentile values of Baltis are lower as compared to Bodhs and Dogras. When compared to ICMR (Fig. 4), upto 12+ years, the 50th percentiles of Baltis are lower, after which the values fluctuate between 25th and 50th centiles of All India data.

At 18+ years, the 50th percentile value of Baltis is significantly higher than ICMR boys. The 50th percentile values of bicristal diameter of Dogras corresponds with the 75th percentile values of all India boys in all the age groups. Comparing the 50th percentiles values of chest circumference with ICMR (All India pooled) values, the Bodhs, Baltis and Dogra boys exhibit significantly higher values at all the age groups (Fig. 5).

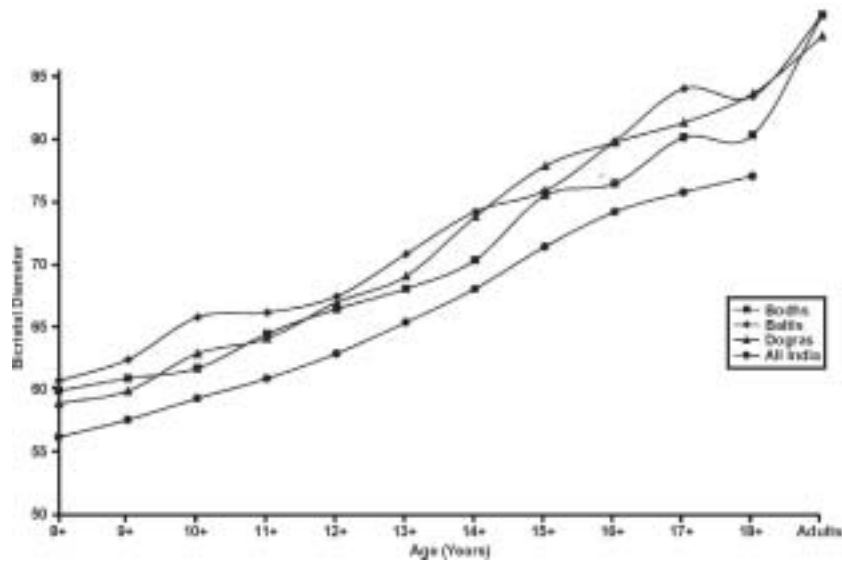


Fig. 4. Median Bieictal Diameter (cm) of the Bodhs, Baltis and Dogra Boys compared with All India Pooled data (ICMR 1972)

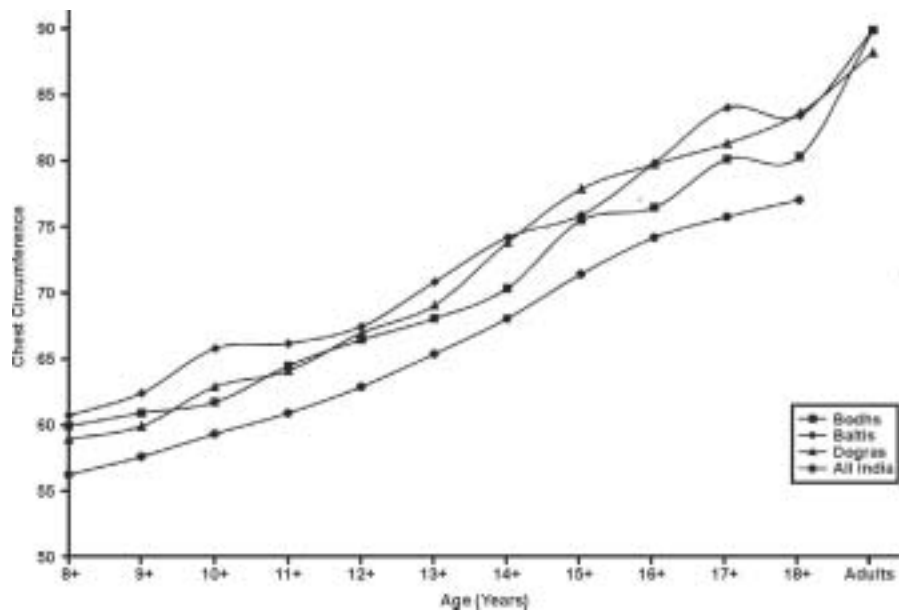


Fig. 5. Median Chest Circumference (cm) of the Bodhs, Baltis and Dogra Boys compared with All India Pooled data (ICMR 1972)

The present data for Jammu and Kashmir boys, when compared with NCHS standards (Hamil et al., 1979), the median weight of all three groups show a distinct fall away from 8+ years

onwards. Median height of Jammu and Kashmir boys also runs beneath the NCHS medians. At all ages, the present children are generally lighter and shorter than the American children. For Bodh

boys at 8+ years 94% were lighter and all were shorter than the NCHS medians, whereas in case of the Baltis 96% were lighter and nearly 98% were shorter. For Dogra boys about 85% were lighter and all were shorter than the NCHS boys.

The percentile tables for other anthropometric measurements are presented here (Table 1 to 3) as reference tables for male population groups of 8+ to 18+ years of Jammu and Kashmir state. No such tables for anthropometric measurements from Jammu and Kashmir state are available so far in the literature. Therefore these tables would be useful for future reference work.

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Table 1: Percentile distribution of various anthropometric measurements among the Ladakhi Budhist of Jammu and Kashmir state, India

1. Height (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	108.77	110.90	113.00	117.50	125.20	127.92	127.35
9+	111.23	114.16	118.50	124.60	127.85	133.46	134.99
10+	113.65	115.96	123.00	128.60	131.63	133.67	140.25
11+	121.82	123.74	126.30	130.00	132.55	136.12	136.96
12+	122.40	125.80	130.32	134.55	139.77	147.30	148.77
13+	128.50	130.14	132.90	137.50	143.10	148.58	149.46
14+	130.24	133.70	139.90	145.70	153.10	161.10	164.14
15+	153.90	142.35	148.72	154.90	161.02	163.35	166.20
16+	140.08	142.30	148.40	156.25	162.05	165.96	169.66
17+	139.61	145.77	156.55	160.05	164.00	168.45	172.33
18+	154.57	155.71	160.02	162.65	165.85	173.45	176.34
19+ and above	161.01	161.50	163.02	165.85	168.27	175.53	175.73

2. Weight (kg)

Age (in years)	Percentiles						
	5th	10th	25th	50th	75th	90th	95th
8+	17.00	17.90	19.00	20.50	23.00	25.10	30.85
9+	18.00	19.50	20.50	23.00	24.50	27.80	30.80
10+	19.42	20.50	22.00	24.75	27.00	28.80	28.72
11+	20.85	23.00	24.00	25.50	27.00	28.15	30.32
12+	23.00	23.00	25.50	28.00	30.87	34.50	44.75
13+	24.70	25.40	28.00	29.50	32.50	35.80	37.30
14+	26.00	26.20	29.50	34.50	39.00	44.50	49.40
15+	28.00	31.00	35.87	40.00	44.62	47.75	50.00
16+	28.70	30.50	35.00	43.00	47.12	50.30	52.97
17+	33.02	34.10	44.50	47.25	50.00	54.80	55.50
18+	43.42	43.50	45.50	48.75	52.37	54.30	55.30
19+ and above	47.00	47.00	50.75	53.75	58.12	64.30	69.60

3. Sitting Height (cm)

Age (in years)	Percentiles						
	5th	10th	25th	50th	75th	90th	95th
8+	57.92	59.80	62.50	64.00	67.40	68.60	73.40
9+	60.85	61.82	64.10	66.70	68.70	70.84	72.01
10+	63.16	63.97	66.57	68.79	70.65	72.41	74.44
11+	63.71	65.52	66.52	68.15	70.00	73.53	74.98
12+	64.82	67.30	68.70	71.40	74.05	78.10	85.02
13+	65.98	68.02	69.40	71.70	75.30	77.08	79.28
14+	67.52	68.54	71.20	75.50	79.92	82.36	83.60
15+	69.95	73.15	76.70	80.90	83.47	86.50	87.35
16+	72.23	73.50	78.55	82.15	84.90	88.38	92.13
17+	71.73	74.45	80.85	83.40	86.72	88.18	90.22
18+	66.52	78.51	83.20	85.05	87.35	89.92	92.05
19+ and above	80.01	82.34	85.07	87.05	89.65	92.19	94.06

4. Biacromial Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	21.90	22.32	23.75	25.00	25.90	27.10	27.56
9+	23.16	25.06	26.00	26.50	27.50	28.40	28.50
10+	24.26	24.96	26.37	27.50	28.50	29.02	29.62
11+	24.81	25.50	26.50	27.30	28.80	29.46	29.79
12+	25.02	25.40	27.00	28.10	27.00	30.75	33.87
13+	25.02	26.46	27.40	28.90	30.50	32.02	32.34
14+	25.60	27.24	28.60	31.00	32.00	34.82	35.80
15+	29.00	29.80	31.40	32.85	34.02	36.45	38.62
16+	28.28	29.71	31.65	33.50	35.10	26.69	38.00
17+	30.80	31.20	33.20	35.50	37.20	38.50	39.90
18+	33.42	34.35	35.17	36.10	38.00	39.00	39.17
19+ and above	29.92	35.25	36.95	38.05	39.00	39.79	40.00

5. Bicristal Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	15.86	16.08	17.85	19.00	20.15	20.70	21.63
9+	17.91	19.04	19.75	20.40	21.15	21.48	22.00
10+	18.49	18.59	19.57	20.80	22.32	22.60	22.83
11+	17.74	18.97	19.95	21.15	21.92	22.59	23.39
12+	18.35	19.80	20.52	21.45	23.07	24.30	24.52
13+	19.24	20.00	21.10	22.10	23.50	24.18	25.08
14+	20.00	20.74	22.10	23.60	25.00	26.58	27.82
15+	21.37	22.15	24.07	25.50	27.22	28.40	29.12
16+	21.17	23.35	24.25	26.15	27.52	29.53	30.16
17+	24.00	24.00	25.60	27.50	28.90	30.00	30.50
18+	25.34	25.82	27.42	28.35	29.07	29.50	29.82
19+ and above	25.43	26.15	27.02	28.20	29.50	30.50	30.82

6. Transverse Diameter of Chest (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	140.70	141.40	151.00	160.00	167.50	181.60	186.50
9+	146.70	152.00	16.00	170.00	177.50	173.40	194.10
10+	151.00	160.00	165.00	178.00	191.00	200.00	204.50
11+	152.40	159.20	168.00	180.00	190.00	200.40	219.60
12+	161.65	168.60	173.50	182.00	193.75	210.00	222.35
13+	164.40	175.00	185.00	190.00	210.50	227.60	229.00
14+	180.60	184.40	199.00	206.00	220.00	228.40	234.40
15+	184.00	189.80	203.00	210.00	222.00	241.40	253.40
16+	178.80	190.00	206.00	221.00	235.00	256.60	265.60
17+	205.20	212.20	217.00	242.00	253.00	272.00	274.00
18+	221.20	228.00	247.00	256.00	265.50	274.20	285.70
19+ and above	218.25	220.50	239.00	247.00	261.50	292.50	326.25

7. Ntero-posterior Diameter of Chest (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	97.30	101.20	110.50	118.00	129.50	147.20	156.20
9+	98.20	101.60	112.00	124.00	131.00	144.20	145.90
10+	100.30	106.00	122.50	132.00	139.50	154.60	165.00
11+	106.40	109.80	120.00	130.00	136.00	146.00	159.60
12+	110.65	113.30	122.00	124.50	136.75	145.00	161.40
13+	116.20	122.40	130.00	139.00	151.50	164.80	167.70
14+	121.60	126.20	135.00	149.00	156.00	169.20	186.40
15+	128.20	131.60	140.00	150.00	160.00	173.00	182.20
16+	126.20	140.40	150.00	160.00	178.00	186.00	198.00
17+	148.80	152.00	156.00	168.00	185.00	195.20	200.80
18+	146.00	175.40	185.00	192.00	198.00	219.40	226.60
19+ and above	149.25	164.00	171.50	183.50	205.00	220.00	231.25

8. Humerus Bicondylar Breadth (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	41.00	41.50	45.00	46.00	50.00	52.00	54.50
9+	40.90	41.80	44.00	47.00	50.00	55.00	60.80
10+	43.10	44.00	47.00	50.00	53.50	55.00	58.70
11+	45.00	47.40	50.00	52.00	55.00	59.20	60.00
12+	49.65	50.00	51.00	54.50	59.00	62.70	65.00
13+	46.30	50.00	52.00	55.00	60.00	61.80	62.00
14+	51.00	53.00	56.00	59.00	63.00	65.00	65.80
15+	54.80	56.00	58.00	60.00	63.00	65.20	67.00
16+	55.40	57.00	60.00	62.00	65.00	65.00	69.20
17+	60.00	61.20	62.00	64.00	67.00	69.00	70.40
18+	57.10	59.00	61.50	64.00	67.00	68.70	71.00
19+ and above	58.25	60.00	63.00	65.00	66.00	69.50	70.25

9. Femur Bicondylar Breadth (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	59.75	62.50	67.00	71.00	73.00	79.00	80.00
9+	62.80	64.60	66.00	70.00	73.00	78.20	80.00
10+	62.40	67.00	70.00	75.00	78.00	82.80	84.90
11+	67.80	69.80	72.00	76.00	80.00	83.00	90.00
12+	70.00	71.60	75.00	79.00	82.70	85.70	87.70
13+	72.00	74.20	77.50	80.00	84.50	86.00	89.80
14+	75.00	75.40	80.00	83.00	87.00	90.00	90.80
15+	78.00	79.80	83.00	76.00	89.00	90.20	91.00
16+	78.60	81.40	84.00	87.00	90.00	94.00	94.80
17+	83.00	84.40	87.00	90.00	91.00	92.00	93.00
18+	78.70	80.00	84.00	87.00	91.00	96.00	98.30
19+ and above	79.00	81.50	87.75	90.50	93.25	95.00	99.00

10. Wrist Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	34.00	35.00	36.00	38.00	40.00	41.00	43.25
9+	31.90	34.00	35.00	37.00	40.50	42.00	45.10
10+	35.10	37.00	40.00	41.00	42.50	45.00	46.00
11+	36.40	38.00	40.00	42.00	44.00	45.00	47.00
12+	38.00	39.30	41.00	43.50	45.75	50.00	51.05
13+	39.00	40.20	43.00	45.00	47.00	50.00	50.00
14+	42.00	42.00	45.00	47.00	50.00	52.20	53.80
15+	44.00	45.00	47.00	50.00	51.00	43.00	54.00
16+	43.40	46.00	47.00	50.00	51.00	53.60	54.00
17+	45.20	47.20	50.00	52.00	52.00	54.80	57.80
18+	45.70	46.00	48.00	52.00	54.00	58.60	59.60
19+ and above	47.00	47.00	50.00	52.00	54.00	55.00	55.75

11. Ankle Diameter (mm)

<i>Age (in years)</i>	<i>Percentiles</i>						
	5	10	25	50	75	90	95
8+	44.50	48.00	50.75	54.50	57.00	60.00	61.25
9+	45.90	50.40	53.00	55.00	59.50	61.20	64.00
10+	48.40	53.20	56.50	60.00	62.00	64.80	68.90
11+	52.20	55.80	58.00	61.00	63.00	67.00	68.00
12+	53.65	56.30	60.00	68.00	65.75	68.78	70.35
13+	56.00	58.20	61.00	65.00	68.00	70.80	71.00
14+	60.00	60.40	62.00	66.00	70.00	71.00	71.80
15+	61.80	63.80	64.00	69.00	72.00	74.00	75.00
16+	63.00	64.00	67.00	69.00	70.00	72.00	75.40
17+	61.80	64.20	69.00	70.00	74.00	76.00	81.60
18+	62.20	64.00	67.00	71.00	74.50	76.00	76.00
19+ and above	64.00	67.00	70.00	72.00	75.00	78.00	86.00

12. Inspired Chest Diameter (cm)

<i>Age (in years)</i>	<i>Percentiles</i>						
	5	10	25	50	75	90	95
8+	57.71	59.89	62.30	64.00	65.40	69.00	70.21
9+	63.00	63.20	64.35	67.00	69.55	71.80	72.54
10+	62.71	62.80	64.00	67.00	69.62	72.16	74.15
11+	63.71	64.00	66.00	69.00	71.65	74.00	75.33
12+	64.17	66.00	68.25	72.00	73.37	78.50	86.26
13+	66.04	68.32	71.00	73.50	76.00	77.60	79.28
14+	67.60	68.20	73.80	77.00	80.60	84.60	87.66
15+	72.00	75.50	79.00	81.00	84.10	88.00	87.66
16+	67.87	72.70	76.60	81.00	86.10	89.00	90.65
17+	72.83	77.20	80.50	85.95	88.95	90.00	92.60
18+	79.92	80.80	83.00	85.00	88.75	89.91	91.60
19+ and above	84.00	86.95	90.52	92.00	96.07	98.72	99.76

13. Normal Chest Diameter (cm)

<i>Age (in years)</i>	<i>Percentiles</i>						
	5	10	25	50	75	90	95
8+	53.42	56.04	57.80	59.80	60.80	62.72	65.40
9+	58.04	58.46	59.70	60.80	63.30	66.04	59.07
10+	57.92	58.39	59.80	61.60	64.67	66.36	69.42
11+	58.21	59.54	59.90	64.35	66.80	59.12	70.25
12+	59.80	60.30	64.12	66.40	68.40	74.35	79.15
13+	60.68	63.40	65.80	68.80	70.80	72.64	74.14
14+	63.46	64.32	66.80	70.30	76.40	80.32	82.80
15+	66.25	69.80	73.27	75.45	78.42	82.15	85.17
16+	64.12	66.87	72.10	76.80	80.60	83.60	84.79
17+	67.02	69.90	75.00	80.20	84.00	85.89	86.76
18+	76.19	76.85	78.92	80.40	83.47	84.45	88.38
19+ and above	80.07	83.90	86.22	90.00	92.42	93.89	95.40

14. Expired Chest Diameter (cm)

<i>Age (in years)</i>	<i>Percentiles</i>						
	5	10	25	50	75	90	95
8+	50.70	52.60	55.00	57.00	59.00	60.40	63.08
9+	55.19	56.02	57.55	58.30	60.80	63.10	64.81
10+	54.54	55.94	57.00	59.55	62.20	64.49	66.36
11+	56.35	57.07	58.07	61.50	63.32	65.18	67.57
12+	58.02	58.10	62.00	63.05	66.07	70.60	75.90
13+	59.00	61.50	63.10	64.30	67.20	70.22	70.66
14+	61.24	61.42	64.00	67.80	73.50	77.42	80.98
15+	63.62	65.55	70.00	73.00	75.70	79.75	82.10
16+	62.02	63.70	68.82	73.10	78.22	81.58	82.23
17+	63.40	68.01	72.15	76.40	79.50	82.09	83.36
18+	73.08	73.80	74.27	77.05	80.00	81.46	82.23
19+ and above	75.97	78.46	82.07	85.15	88.10	90.37	92.05

15. Arm Girth (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	12.09	13.00	13.45	14.00	14.50	15.00	16.41
9+	13.23	13.50	14.00	14.30	15.05	16.24	17.89
10+	13.90	14.00	14.42	15.00	15.70	16.80	16.90
11+	13.37	14.00	14.50	16.05	17.29	17.29	17.82
12+	14.00	14.30	15.00	16.00	16.40	17.65	19.87
13+	13.38	14.06	15.10	16.10	17.40	18.12	18.46
14+	14.80	15.00	16.00	17.00	18.00	19.80	20.46
15+	15.52	16.00	17.74	18.10	19.50	20.00	21.00
16+	15.33	15.96	17.47	18.85	20.02	21.12	21.86
17+	15.58	17.46	19.12	20.02	21.90	22.48	23.09
18+	18.17	18.68	19.35	20.00	21.00	22.24	23.01
19+ and above	19.50	20.00	20.90	21.60	23.00	24.37	26.45

16. Arm Girth (Contracted) (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	13.56	14.14	14.90	15.70	16.30	17.44	17.87
9+	13.34	14.92	15.60	16.40	17.10	18.58	19.54
10+	15.09	15.30	15.80	16.50	17.82	18.71	18.92
11+	15.05	15.41	16.15	16.80	18.00	19.72	20.62
12+	15.30	16.00	16.62	17.62	19.00	20.50	23.32
13+	14.92	15.96	17.20	18.20	19.50	20.40	21.12
14+	16.06	16.44	18.00	19.60	20.40	22.06	23.44
15+	17.37	18.20	19.75	20.90	22.40	23.50	23.92
16+	17.60	18.00	19.72	21.60	23.02	23.79	24.69
17+	17.24	18.86	21.85	23.10	24.95	26.09	26.59
18+	20.68	21.42	22.12	23.75	24.32	25.86	27.21
19+ and above	21.32	22.72	23.52	24.75	27.20	28.09	29.97

17. Calf Girth (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	18.31	18.74	20.40	21.00	22.10	23.04	23.31
9+	19.33	19.60	20.50	22.00	23.30	24.08	24.10
10+	20.28	20.93	22.00	22.50	23.22	25.12	25.90
11+	20.40	20.88	21.80	22.80	23.65	24.83	25.00
12+	21.35	21.60	22.25	23.90	24.95	26.16	29.27
13+	20.72	22.10	23.30	24.60	25.40	26.50	27.04
14+	22.36	22.72	24.00	26.40	27.30	28.68	29.88
15+	22.70	23.40	26.40	27.40	28.85	29.85	30.02
16+	22.27	22.88	24.15	27.50	29.37	30.70	31.13
17+	23.76	25.46	27.82	29.00	30.47	31.40	32.29
18+	27.25	27.71	28.00	29.00	30.00	32.00	32.41
19+ and above	27.44	28.00	29.10	30.90	32.45	34.00	34.49

18. Biceps Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	1.75	2.00	2.00	2.50	3.00	4.00	4.25
9+	1.00	2.00	2.00	3.00	3.00	4.00	4.40
10+	2.00	2.00	2.00	2.00	3.00	4.00	4.90
11+	2.00	2.00	2.00	2.00	3.00	4.20	5.00
12+	2.00	2.00	2.00	2.00	3.00	4.00	5.35
13+	2.00	2.00	2.00	3.00	3.00	4.00	4.90
14+	1.20	2.00	2.00	3.00	3.00	4.00	4.00
15+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
16+	2.00	2.00	3.00	3.00	4.00	4.00	4.00
17+	2.00	2.20	3.00	3.00	4.00	4.00	4.40
18+	2.00	2.00	3.00	3.00	4.00	4.00	4.60
19+ and above	2.00	2.00	3.00	3.00	4.00	5.50	7.25

19. Triceps Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	4.00	5.00	5.75	7.00	8.00	10.00	10.25
9+	2.90	3.80	5.00	6.00	7.00	9.20	11.00
10+	3.10	4.00	5.00	6.00	7.00	11.00	12.00
11+	4.00	5.00	5.00	6.00	7.00	9.20	11.60
12+	3.65	4.00	5.00	6.00	7.00	9.00	11.05
13+	3.10	4.00	4.00	6.00	7.00	9.00	11.05
14+	3.00	4.00	5.00	6.00	7.00	8.00	8.90
15+	3.00	4.00	5.00	6.00	7.00	8.00	9.00
16+	4.00	4.00	5.00	6.00	7.00	8.60	9.00
17+	4.00	4.20	5.00	6.00	7.00	9.60	11.00
18+	3.70	4.00	5.00	6.00	6.50	8.00	10.00
19+ and above	3.00	3.00	4.00	6.65	8.00	9.50	10.75

20. Subscapular Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	3.00	3.00	4.00	4.00	5.00	5.00
9+	2.00	2.80	3.00	3.00	4.00	4.00	5.00
10+	3.00	3.00	3.00	4.00	4.00	5.00	5.00
11+	3.00	3.00	3.00	4.00	4.00	4.00	5.60
12+	3.00	3.20	3.00	4.00	4.75	5.00	6.00
13+	3.00	3.00	3.00	4.00	4.00	5.00	5.90
14+	3.00	4.00	4.00	4.00	5.00	6.00	6.00
15+	3.00	4.00	4.00	4.00	5.00	6.00	6.60
16+	4.00	4.00	5.00	5.00	6.00	7.00	8.60
17+	4.00	4.20	6.00	7.00	7.00	9.80	11.00
18+	4.00	4.00	5.00	6.00	7.00	7.60	8.00
19+ and above	3.25	5.00	6.00	7.00	8.00	10.00	18.00

21. Suprailiac Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	2.00	2.00	3.00	3.00	5.00	5.25
9+	2.00	2.00	2.00	3.00	4.00	5.00	5.30
10+	2.00	2.00	2.00	3.00	3.00	4.00	5.80
11+	2.00	2.00	3.00	3.00	4.00	5.00	5.60
12+	2.00	2.00	2.25	3.00	4.00	5.70	8.35
13+	2.00	2.00	3.00	3.00	4.00	5.00	6.00
14+	2.00	2.00	3.00	4.00	5.00	5.00	6.00
15+	2.40	3.00	3.00	4.00	4.00	5.00	5.60
16+	3.00	3.00	4.00	5.00	5.00	7.20	8.80
17+	3.00	4.00	4.00	5.00	6.00	8.80	7.40
18+	3.00	4.00	4.00	5.00	6.00	6.60	7.00
19+ and above	3.00	3.35	4.00	5.00	7.00	8.50	10.75

22. Calf Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	3.00	3.00	3.75	5.50	7.25	8.00	9.25
9+	2.00	2.00	3.00	5.00	6.00	6.20	10.10
10+	2.10	3.00	4.00	5.00	6.00	7.00	8.90
11+	2.00	3.00	3.00	5.00	6.00	7.20	9.20
12+	3.00	3.00	4.00	5.00	7.00	8.70	9.35
13+	2.05	3.00	4.00	5.00	6.00	7.00	8.00
14+	2.00	2.40	4.00	5.00	6.00	8.60	9.80
15+	3.00	3.00	4.00	5.00	7.00	8.00	10.00
16+	3.00	4.00	4.75	6.00	7.00	9.40	10.00
17+	3.60	4.00	5.00	5.00	6.00	8.00	9.40
18+	3.00	3.00	3.00	4.00	5.00	7.60	9.00
19+ and above	2.00	3.00	4.00	4.00	5.25	8.00	9.00

23. Forearm Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	2.00	3.00	4.00	7.00	7.00	8.00
9+	2.00	2.00	2.00	3.00	4.00	6.20	7.30
10+	2.00	2.00	3.00	3.00	4.00	6.80	7.00
11+	2.00	2.00	2.00	3.00	4.00	5.00	6.20
12+	2.00	2.00	2.00	3.00	4.00	5.70	7.05
13+	2.00	2.00	2.00	3.00	4.00	5.80	6.00
14+	2.00	2.00	2.00	3.00	3.00	4.00	4.80
15+	2.00	2.00	2.00	3.00	3.00	4.00	5.60
16+	2.00	2.00	3.00	3.00	4.00	4.00	5.80
17+	2.00	2.00	3.00	3.00	3.00	4.00	4.40
18+	2.00	2.00	2.00	3.00	3.50	4.00	4.30
19+ and above	2.00	2.00	2.00	3.00	3.25	5.50	7.00

Table 2: Percentile distribution of various anthropometric measurements among the Baltis of Jammu and Kashmir state, India**1. Height (cm)**

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	104.77	108.35	113.22	117.50	122.70	125.05	128.30
9+	105.90	113.62	117.20	123.00	127.20	132.84	137.12
10+	117.34	121.44	124.85	130.03	134.70	139.22	145.47
11+	121.40	124.14	128.70	132.60	137.60	142.70	145.40
12+	128.14	129.76	132.12	139.20	143.42	150.26	157.74
13+	125.98	127.76	134.90	140.60	146.95	149.20	150.06
14+	132.90	140.80	144.30	150.00	157.10	162.40	163.74
15+	144.56	146.00	150.60	153.60	158.90	161.52	162.52
16+	147.52	148.16	151.40	155.90	162.40	165.92	170.20
17+	152.42	154.22	156.80	160.50	167.50	170.32	172.06
18+	153.53	155.88	158.55	161.80	165.55	167.44	170.32
19+ and above	157.17	159.70	162.50	164.20	165.87	141.50	173.60

2. Weight (kg)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	15.25	16.25	19.37	21.75	23.12	25.00	25.12
9+	15.95	18.80	20.00	23.50	25.25	27.00	29.15
10+	19.60	22.20	24.00	25.00	28.00	33.30	37.10
11+	24.00	24.00	24.50	26.50	30.50	34.50	35.60
12+	24.32	25.00	26.12	29.50	34.00	41.80	44.52
13+	24.50	26.50	28.00	32.50	36.00	39.00	40.35
14+	28.10	30.10	34.50	38.00	43.50	47.30	50.00
15+	33.00	35.00	37.50	41.00	45.00	47.20	48.30
16+	37.60	39.50	41.00	46.00	49.00	51.80	53.70
17+	41.30	44.70	48.00	50.50	53.00	57.50	60.20
18+	40.20	45.30	48.25	52.00	53.50	57.20	59.15
19+ and above	41.37	46.25	53.00	55.00	52.87	64.00	67.75

3. Sitting Height (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	58.62	59.10	60.55	64.15	67.15	70.30	74.82
9+	61.26	62.06	63.55	65.80	67.50	59.68	71.08
10+	62.83	65.03	66.86	69.65	72.07	75.71	77.25
11+	64.12	65.36	67.30	69.10	72.80	74.42	76.06
12+	65.32	66.53	68.97	72.55	76.12	78.95	82.55
13+	66.14	67.50	69.65	73.50	75.90	79.08	81.23
14+	69.56	70.90	74.30	78.40	81.10	84.76	87.68
15+	74.12	74.74	76.80	80.60	83.00	84.00	85.14
16+	72.12	76.04	78.60	80.90	85.40	88.30	89.94
17+	77.70	79.04	81.80	84.20	86.50	89.68	90.18
18+	75.98	80.74	83.55	86.00	88.70	90.92	92.38
19+ and above	80.31	82.66	84.50	86.50	89.00	91.06	91.98

4. Biacromial Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	20.73	22.00	23.000	23.50	25.00	25.80	26.00
9+	21.59	21.98	23.00	24.70	25.25	26.68	28.00
10+	23.12	23.66	24.80	25.50	27.05	28.80	30.36
11+	23.94	24.08	25.10	26.40	27.10	28.44	29.18
12+	24.36	25.00	26.00	27.20	29.00	30.41	32.28
13+	25.10	26.14	27.65	29.00	30.70	33.00	34.43
14+	26.68	27.96	29.20	30.60	32.00	33.16	34.70
15+	28.00	28.36	30.20	31.80	33.00	34.50	35.00
16+	28.28	29.64	31.50	33.00	35.40	36.94	38.24
17+	32.20	33.56	34.00	36.00	37.20	28.26	39.42
18+	33.02	34.58	35.25	37.50	38.55	39.24	39.71
19+ and above	33.07	33.25	34.45	36.15	38.12	39.00	40.27

5. Bicristal Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	15.00	15.70	16.45	17.50	18.45	19.36	20.04
9+	15.79	16.16	17.30	18.10	19.00	19.64	20.14
10+	16.56	17.54	18.30	19.50	20.75	22.16	23.40
11+	17.04	17.84	18.40	19.70	21.00	21.84	22.54
12+	18.39	18.76	19.20	20.00	21.80	23.33	24.00
13+	19.00	19.22	20.35	22.00	23.50	24.80	25.98
14+	20.00	20.54	21.40	23.00	23.90	26.44	26.98
15+	20.26	21.40	22.60	24.00	26.00	27.56	28.48
16+	21.06	21.68	22.80	24.30	26.30	27.80	29.46
17+	23.74	24.00	25.10	26.00	27.10	28.44	29.46
18+	23.47	25.42	26.20	28.30	39.55	30.26	30.43
19+ and above	23.95	24.90	27.07	27.75	28.85	30.75	31.82

6. Transverse Diameter of Chest (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	139.20	149.20	165.00	178.00	190.50	195.60	198.20
9+	174.10	179.20	184.50	193.00	199.00	209.80	214.90
10+	174.85	176.90	184.50	196.00	205.00	210.40	221.00
11+	116.05	170.00	180.00	195.00	206.75	215.00	219.65
12+	163.75	168.50	184.00	197.00	204.50	215.50	230.00
13+	170.40	172.60	182.00	200.00	212.00	222.40	226.80
14+	173.00	185.00	196.00	205.00	218.00	240.00	248.80
15+	188.75	202.00	209.75	220.00	233.25	248.50	257.25
16+	192.05	199.80	210.00	225.50	240.00	248.70	278.25
17+	209.00	215.00	226.00	240.00	261.00	268.00	283.00
18+	223.95	228.50	234.25	247.00	257.50	270.80	282.20
19+ and above	231.05	235.40	244.25	254.00	265.75	279.00	284.30

7. Antero Posterior Diameter of Chest (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	91.70	112.00	122.00	139.00	149.50	158.00	160.30
9+	128.60	134.20	142.00	145.00	154.00	164.00	177.60
10+	114.90	131.10	138.75	147.00	154.00	164.40	170.30
11+	123.70	126.70	134.00	148.00	154.00	161.00	165.00
12+	118.00	125.00	132.50	143.00	155.50	166.00	171.00
13+	124.00	127.80	136.00	145.00	158.00	174.00	175.00
14+	124.00	127.80	136.00	145.00	158.00	174.00	175.00
15+	137.00	143.00	153.75	165.00	175.25	189.00	190.00
16+	137.85	147.10	156.00	170.00	178.50	190.00	194.00
17+	147.00	154.00	170.00	181.00	186.00	194.00	196.00
18+	147.00	154.00	170.00	181.00	186.75	199.00	204.95
19+ and above	170.35	172.70	179.00	190.00	201.00	210.30	213.60

8. Humerus Bicondylar Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	41.90	42.00	42.50	46.00	47.00	49.00	49.10
9+	42.00	42.40	46.00	47.00	50.00	50.00	53.80
10+	42.00	43.00	46.00	48.00	52.00	53.10	55.05
11+	42.70	44.70	47.75	50.50	52.25	55.00	55.00
12+	46.00	47.00	50.00	52.00	55.00	57.00	61.50
13+	45.40	47.80	52.00	54.00	56.00	58.00	60.20
14+	47.60	50.20	52.00	56.00	60.00	63.80	64.80
15+	52.00	54.00	57.00	61.00	63.00	65.00	65.75
16+	51.35	54.10	56.75	59.00	64.00	67.30	70.00
17+	55.05	56.00	60.00	62.50	64.00	65.90	66.95
18+	57.55	58.70	60.00	62.00	65.00	66.60	69.45
19+ and above	60.00	60.00	61.75	63.00	66.25	62.00	69.65

9. Femur Bicondylar Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	64.90	66.00	70.00	72.00	74.50	77.20	80.00
9+	64.00	67.00	71.50	73.00	75.50	78.00	80.90
10+	68.00	68.00	72.00	75.00	77.25	80.20	82.10
11+	67.40	71.00	74.00	76.00	79.25	81.00	82.00
12+	72.25	73.50	75.25	78.00	80.00	86.00	87.50
13+	73.40	75.00	77.00	80.00	84.00	86.20	88.20
14+	75.00	76.20	80.00	85.00	87.00	90.00	92.20
15+	80.00	82.00	83.75	86.00	87.25	92.00	93.00
16+	75.70	78.70	82.00	86.50	91.25	93.30	95.00
17+	80.05	82.00	85.00	87.00	88.00	94.00	94.00
18+	77.95	81.70	85.00	88.00	91.75	94.00	95.45
19+ and above	84.00	85.00	86.00	90.00	91.00	93.30	95.30

10. Wrist Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	31.60	32.80	35.00	37.00	38.00	41.20	47.00
9+	35.00	36.00	36.50	38.00	40.00	42.00	43.00
10+	33.95	36.00	37.75	40.00	42.00	43.00	45.05
11+	35.00	36.00	38.00	41.00	42.00	44.30	45.00
12+	37.00	38.00	40.00	41.00	43.00	45.00	49.95
13+	38.80	40.00	41.00	44.00	45.00	47.20	49.00
14+	39.60	40.00	43.00	46.00	47.00	50.00	54.80
15+	41.00	44.00	46.00	49.00	50.00	51.50	52.25
16+	41.35	42.70	46.00	47.00	51.00	52.00	55.30
17+	43.10	45.00	47.00	50.00	52.00	53.90	54.95
18+	42.70	45.40	48.00	50.00	51.00	53.00	53.15
19+ and above	45.00	46.70	48.75	51.00	54.00	55.00	59.25

11. Ankle Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	40.60	45.80	51.00	53.00	56.50	58.40	60.30
9+	51.10	52.00	54.50	57.00	59.00	62.00	66.50
10+	51.75	52.90	55.00	59.00	62.25	64.10	67.10
11+	50.35	53.70	57.00	60.50	62.25	64.00	65.00
12+	56.50	58.00	59.00	62.00	65.00	67.50	69.00
13+	57.00	57.80	61.00	63.00	67.00	69.20	70.60
14+	57.00	60.00	63.00	67.00	70.00	74.60	75.00
15+	61.75	64.00	67.00	69.00	71.25	74.00	75.00
16+	58.00	59.70	64.00	68.00	71.25	73.00	73.65
17+	61.05	62.20	64.25	70.00	73.75	74.90	75.95
18+	63.70	65.00	67.00	70.00	73.75	76.00	76.15
19+ and above	63.35	64.70	68.00	72.00	76.00	77.00	78.00

12. Inspired Chest Circumference (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	56.57	58.80	62.72	64.25	66.25	69.55	70.50
9+	58.18	60.00	63.00	65.50	69.10	72.00	75.01
10+	61.65	63.04	67.00	70.00	71.25	73.58	79.40
11+	64.20	65.00	68.00	70.00	73.00	76.22	80.20
12+	67.04	68.03	69.57	72.90	76.20	80.34	83.30
13+	68.00	68.36	71.55	74.00	79.10	82.00	82.90
14+	69.40	72.64	75.00	80.00	84.00	87.96	89.00
15+	72.60	75.84	78.50	81.00	84.00	86.40	88.92
16+	76.40	79.00	81.00	86.00	88.20	91.20	93.00
17+	82.80	85.00	87.00	89.00	93.00	96.80	98.60
18+	80.08	81.40	84.00	87.90	89.65	90.76	91.18
19+ and above	83.00	85.55	90.15	93.00	97.00	99.55	106.20

13. Normal Chest Circumference (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	54.91	56.20	58.85	60.60	63.35	65.36	67.58
9+	56.35	57.20	59.25	62.30	65.40	67.12	67.69
10+	59.60	60.00	63.55	65.65	67.20	69.17	74.81
11+	60.78	62.26	64.00	66.10	68.40	72.50	75.92
12+	61.76	63.26	65.10	67.40	71.40	75.56	78.32
13+	64.50	64.72	66.70	70.80	74.50	76.70	76.80
14+	64.82	66.24	71.40	74.20	79.80	82.50	84.28
15+	66.67	71.50	73.02	75.90	78.97	82.70	84.87
16+	73.83	75.31	77.10	79.85	83.67	84.87	88.22
17+	78.46	79.16	81.40	84.10	88.60	91.08	93.10
18+	75.11	76.06	79.25	83.50	84.60	86.16	87.00
19+ and above	79.50	81.00	87.30	90.00	92.22	94.05	98.10

14. Expired Chest Circumference (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	53.05	54.95	56.10	58.75	60.92	63.05	65.17
9+	53.92	54.84	57.40	60.00	62.85	65.12	65.28
10+	58.01	58.22	60.90	63.20	64.65	66.90	71.42
11+	58.62	60.00	61.50	64.10	66.60	69.04	70.80
12+	59.72	60.16	62.15	65.35	67.90	73.67	76.17
13+	62.00	62.24	64.05	68.00	71.30	74.00	74.29
14+	62.32	63.84	96.60	71.90	78.10	80.28	82.00
15+	64.40	67.96	70.60	73.00	76.00	78.74	81.24
16+	70.28	81.52	74.50	77.20	80.40	82.80	85.88
17+	75.06	75.86	78.00	80.50	84.90	88.88	91.00
18+	71.44	72.84	75.45	80.00	81.40	82.90	84.67
19+ and above	76.90	79.50	82.95	85.15	88.22	91.30	95.57

15. Arm Girth (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	12.87	13.75	14.42	15.35	16.07	17.40	18.00
9+	13.45	13.98	14.45	15.70	16.55	17.82	18.00
10+	14.00	14.40	15.65	16.00	17.10	17.88	19.00
11+	15.00	15.00	16.00	16.30	17.50	18.50	19.60
12+	15.16	15.50	16.00	17.00	18.00	19.90	20.00
13+	15.40	15.60	16.50	17.40	18.80	19.40	19.50
14+	16.08	16.50	18.00	19.00	20.00	21.00	22.32
15+	17.00	17.44	18.00	19.00	20.00	21.00	21.64
16+	18.04	18.50	19.00	19.80	21.00	22.16	22.66
17+	19.10	19.60	20.40	21.30	22.20	23.00	23.46
18+	18.97	19.34	20.30	22.00	23.05	23.72	23.86
19+ and above	19.10	20.20	21.40	22.00	23.00	23.80	24.25

16. Arm Girth (Contracted) (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	13.92	15.00	15.77	16.90	17.92	19.45	19.92
9+	15.04	15.36	15.90	17.00	18.40	19.04	19.91
10+	15.53	15.88	17.30	17.80	19.90	19.80	21.00
11+	15.78	16.52	17.50	18.10	19.20	20.52	21.26
12+	16.93	17.23	18.00	19.20	20.00	22.00	22.92
13+	16.84	17.56	18.15	19.40	21.00	22.42	22.98
14+	17.66	18.22	20.20	21.30	23.10	24.60	25.70
15+	19.32	19.50	20.50	21.80	22.50	23.96	25.52
16+	19.80	20.12	21.00	22.30	24.70	25.88	26.56
17+	21.96	22.40	23.50	24.10	25.80	26.80	28.34
18+	21.36	22.08	23.55	25.00	26.00	26.98	27.46
19+ and above	21.62	22.05	24.00	25.75	26.40	27.10	28.40

17. Calf Girth (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	18.92	19.80	21.00	22.00	23.90	25.00	25.25
9+	19.97	20.28	21.50	23.00	23.90	25.04	27.01
10+	20.08	20.98	23.00	23.60	24.20	27.02	28.85
11+	21.88	22.30	23.20	24.10	25.20	26.48	27.68
12+	21.95	22.89	24.00	25.00	27.00	28.91	30.00
13+	22.37	23.24	24.30	25.60	27.10	28.88	30.40
14+	24.00	24.64	26.30	27.80	29.20	31.16	32.24
15+	23.80	25.96	27.00	28.50	29.40	30.36	31.00
16+	24.58	27.00	28.50	29.30	30.30	31.44	32.24
17+	27.60	28.60	29.60	31.00	32.50	33.24	33.80
18+	26.30	27.93	29.25	30.20	32.17	33.31	34.76
19+ and above	25.87	28.50	29.95	31.00	32.50	33.75	35.75

18. Skinfolds Biceps (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	1.90	2.00	2.00	2.00	3.00	3.00	4.00
9+	2.00	2.00	2.00	2.00	3.00	3.00	3.90
10+	2.00	2.00	2.00	2.00	3.00	3.10	4.00
11+	2.00	2.00	2.00	2.00	3.00	3.00	4.00
12+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
13+	1.40	2.00	2.00	2.00	3.00	3.00	4.00
14+	2.00	2.00	2.00	2.00	3.00	3.80	4.00
15+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
16+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
17+	2.00	2.00	2.00	3.00	3.00	4.00	4.25
18+	2.00	2.00	2.00	3.00	3.00	4.00	5.30
19+ and above	2.00	2.00	2.00	3.00	3.25	5.00	6.65

19. Triceps Biceps (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.90	3.80	4.00	5.00	5.50	7.00	7.00
9+	3.00	3.20	4.00	5.00	6.00	7.00	7.00
10+	3.00	3.00	4.00	5.00	5.00	6.10	8.05
11+	3.00	3.00	4.00	5.00	6.00	7.60	9.00
12+	4.00	4.00	4.00	5.00	6.00	7.00	7.75
13+	2.40	3.00	4.00	5.00	6.00	7.00	7.60
14+	3.00	4.00	4.00	5.00	6.00	7.00	8.00
15+	3.00	3.00	4.00	5.00	5.00	7.00	7.00
16+	3.35	4.00	4.00	5.00	6.00	6.30	8.65
17+	4.00	4.00	5.00	5.50	7.00	7.90	8.95
18+	3.85	4.00	4.25	5.00	6.00	8.00	10.45
19+ and above	3.00	3.00	4.00	5.00	8.00	9.00	10.65

20. Subscapular Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	2.00	3.00	3.00	4.00	4.00	4.10
9+	3.00	3.00	3.00	4.00	4.00	4.00	4.90
10+	3.00	3.00	3.00	3.00	4.00	4.00	5.00
11+	3.00	3.00	3.00	3.50	4.00	4.30	5.00
12+	3.00	3.00	3.00	4.00	4.00	5.00	5.75
13+	3.00	3.00	3.00	4.00	4.00	5.00	5.00
14+	3.00	3.00	3.00	4.00	5.00	6.00	6.00
15+	3.00	4.00	4.00	5.00	5.00	6.00	6.25
16+	3.00	4.00	4.00	5.00	5.25	6.00	6.65
17+	4.00	4.00	5.00	6.00	7.00	7.90	8.95
18+	5.00	5.00	5.00	6.00	7.00	7.30	8.15
19+ and above	5.00	5.00	6.00	7.50	9.00	11.30	15.30

21. Suprailiac Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	1.90	2.00	2.00	2.00	3.00	4.00	4.10
9+	2.00	2.00	2.00	2.00	3.00	3.80	4.00
10+	2.00	2.00	2.00	3.00	3.00	3.00	3.05
11+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
12+	2.00	2.00	3.00	3.00	4.00	5.00	6.50
13+	2.00	2.00	2.00	3.00	4.00	5.00	5.00
14+	2.00	2.00	3.00	3.00	4.00	5.00	5.00
15+	2.00	2.00	3.00	3.00	4.00	5.00	5.00
16+	2.00	2.00	3.00	4.00	5.00	6.00	7.00
17+	2.00	3.00	4.00	4.00	5.00	7.00	8.00
18+	3.00	3.00	4.00	5.00	6.00	6.00	6.15
19+ and above	3.00	3.00	4.00	5.00	6.00	8.60	14.65

22. Calf Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	3.00	3.00	4.00	5.00	6.00	7.00
9+	2.10	3.00	3.00	3.00	5.00	6.00	6.00
10+	2.00	2.90	3.00	4.00	5.00	5.00	6.05
11+	2.00	2.70	3.00	4.00	5.00	7.00	7.65
12+	3.00	3.00	3.00	4.50	6.00	7.00	7.00
13+	2.00	2.80	3.00	4.00	5.00	6.20	7.00
14+	2.00	3.00	4.00	5.00	6.00	8.00	8.40
15+	3.00	3.00	4.00	5.00	6.00	8.00	8.40
16+	2.35	3.00	3.00	4.00	5.00	7.00	8.00
17+	3.00	3.00	4.00	5.00	6.00	7.00	7.00
18+	3.00	3.70	4.00	5.00	6.00	6.30	7.45
19+ and above	2.35	3.00	3.00	4.00	5.25	8.30	9.65

23. Forearm Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	1.90	2.00	3.00	3.00	4.00	4.00	4.10
9+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
10+	2.00	2.00	2.00	2.50	3.00	3.10	4.00
11+	2.00	2.00	2.00	3.00	3.00	4.00	4.65
12+	2.00	2.00	2.00	3.00	3.00	4.00	5.50
13+	2.00	2.00	2.00	3.00	3.00	4.00	4.00
14+	2.00	2.00	2.00	3.00	3.00	4.00	5.40
15+	2.00	2.00	2.00	3.00	3.00	3.00	4.00
16+	2.00	2.00	2.00	3.00	3.00	4.00	5.95
17+	2.00	2.00	3.00	3.00	3.00	4.00	5.00
18+	2.00	2.00	3.00	3.00	3.00	4.00	4.15
19+ and above	2.00	2.00	2.00	3.00	3.00	4.30	5.95

Table 3: Percentile distribution of various anthropometric measurements among the Gogras of Jammu and Kashmir state, India**1. Height (cm)**

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	113.34	117.74	119.80	125.00	129.90	134.20	139.44
9+	120.28	121.45	123.67	127.90	131.75	133.95	135.77
10+	122.50	125.45	129.65	133.20	136.87	140.45	141.80
11+	122.95	126.75	132.95	138.30	144.42	148.90	153.25
12+	130.88	133.95	139.10	143.95	149.05	155.84	160.77
13+	134.24	138.90	143.90	150.10	156.30	159.92	163.60
14+	141.25	145.43	153.52	157.00	163.35	165.30	167.00
15+	151.90	154.80	158.75	163.40	167.15	173.80	176.10
16+	154.38	156.64	161.00	165.00	169.00	170.98	171.00
17+	154.52	158.71	165.25	166.80	170.82	174.16	178.03
18+	157.95	161.33	164.90	168.50	173.72	178.46	179.76
19+ and above	159.45	161.80	167.80	169.80	172.37	174.51	175.94

2. Weight (kg)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	15.70	17.00	18.50	20.50	24.00	25.60	26.50
9+	18.00	19.00	21.00	22.50	24.00	26.00	26.57
10+	19.52	20.55	22.50	25.00	26.37	29.45	30.00
11+	20.37	21.00	24.00	27.25	30.00	35.25	38.00
12+	24.00	24.35	27.37	30.00	33.25	38.00	41.47
13+	26.00	27.00	29.00	34.00	38.50	42.70	46.80
14+	29.00	30.00	35.26	40.75	44.50	48.20	50.00
15+	34.75	39.00	41.25	44.50	48.00	52.00	56.00
16+	34.65	40.20	43.25	48.00	50.00	52.80	55.95
17+	40.07	42.00	46.00	49.00	53.00	58.35	61.87
18+	42.40	45.70	49.50	52.00	54.00	59.00	65.60
19+ and above	49.22	50.00	53.00	59.25	64.00	71.10	80.75

3. Sitting Height (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	59.16	60.40	63.40	65.00	68.10	70.96	81.64
9+	60.00	60.47	63.00	66.80	69.37	72.04	74.25
10+	61.50	63.90	66.80	70.10	72.20	74.60	83.30
11+	61.74	63.74	67.50	70.40	73.85	74.96	77.29
12+	67.81	68.80	70.80	73.20	76.50	80.28	88.90
13+	68.16	70.22	73.80	77.40	79.80	82.36	83.68
14+	71.68	73.66	77.00	80.10	83.40	85.50	86.10
15+	75.25	77.20	80.45	84.00	85.70	88.20	89.30
16+	78.82	79.98	81.85	85.40	88.05	89.38	89.90
17+	78.21	82.41	83.50	85.85	87.45	88.86	91.37
18+	80.75	81.64	83.75	86.85	88.90	90.23	91.31
19+ and above	78.72	80.84	83.20	84.90	88.00	88.92	89.00

4. Biacromial Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	23.20	24.00	25.40	26.80	27.90	29.00	29.42
9+	25.50	25.71	26.80	27.55	28.40	29.80	30.23
10+	25.81	26.41	27.00	28.85	29.80	30.98	31.78
11+	26.30	26.50	28.00	29.75	31.22	32.50	34.37
12+	27.04	27.87	29.22	32.00	32.50	34.15	35.15
13+	29.08	29.58	31.50	33.00	34.50	36.10	37.50
14+	29.44	30.36	32.20	35.00	36.07	37.55	38.45
15+	32.70	34.00	34.55	35.50	37.10	38.50	40.00
16+	33.05	34.06	35.00	37.00	38.00	38.90	39.09
17+	34.05	35.50	36.50	37.55	38.50	39.90	42.28
18+	36.09	36.71	37.80	38.95	40.10	41.31	43.78
19+ and above	37.22	38.00	38.50	39.50	41.00	42.08	43.00

5. Bicristal Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	17.70	18.28	18.40	19.50	20.50	21.64	22.68
9+	18.40	18.40	19.30	19.90	20.60	21.53	22.81
10+	18.42	19.10	19.80	20.55	21.87	22.50	23.00
11+	19.30	19.70	20.50	21.80	23.02	24.50	25.35
12+	20.07	20.40	21.57	23.00	24.20	25.50	26.22
13+	20.86	21.50	22.40	24.20	25.40	26.40	27.24
14+	22.28	22.50	24.00	25.40	26.87	28.02	28.45
15+	23.15	24.50	25.75	26.60	28.00	29.00	33.25
16+	23.53	24.18	26.50	27.40	28.00	28.80	29.50
17+	24.64	25.55	26.50	27.80	28.90	29.76	29.99
18+	25.79	27.00	27.50	28.60	29.57	30.36	31.00
19+ and above	25.50	26.36	27.50	28.55	30.00	32.00	33.00

6. Transverse Diameter of Chest (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	165.60	170.80	176.00	184.00	190.00	194.00	196.20
9+	169.20	172.10	178.00	184.50	192.70	197.30	200.70
10+	170.00	175.10	184.00	190.00	200.00	207.80	214.70
11+	174.20	179.00	185.00	198.00	210.00	223.00	230.50
12+	184.30	185.00	195.00	204.00	210.20	224.30	235.00
13+	185.00	193.00	203.00	213.00	224.00	233.40	242.40
14+	195.00	200.00	210.00	220.50	235.00	242.60	255.00
15+	211.00	216.00	225.00	235.00	245.50	258.00	277.50
16+	202.20	210.00	227.00	240.00	250.00	259.00	261.00
17+	228.10	231.10	238.00	249.00	258.00	265.00	268.00
18+	237.70	240.00	246.20	257.00	268.00	280.00	295.10
19+ and above	236.80	244.90	250.00	260.00	275.00	290.00	305.50

7. Antero Poster Diameter of Chest (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	121.40	124.80	131.00	139.00	145.00	152.20	155.20
9+	125.00	127.40	134.20	140.00	146.00	156.00	156.30
10+	125.00	129.00	135.20	144.50	153.00	159.00	179.40
11+	132.70	135.00	140.70	146.00	157.00	168.00	181.00
12+	135.70	137.70	145.00	155.00	162.50	180.00	184.60
13+	140.00	143.40	148.00	160.00	175.00	180.00	184.00
14+	142.20	150.00	160.00	168.50	178.20	189.10	192.70
15+	152.50	162.00	168.00	175.00	185.00	195.00	200.50
16+	160.10	165.00	170.00	178.00	185.50	197.40	200.00
17+	150.70	170.00	178.00	185.50	197.00	200.00	214.70
18+	155.80	163.70	175.00	187.00	200.70	231.30	296.40
19+ and above	170.00	175.00	185.50	196.50	210.00	224.40	241.00

8. Humerus Bicondylar Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	42.80	45.00	46.00	49.00	52.00	55.20	57.60
9+	45.00	46.00	47.00	49.00	51.00	52.30	56.30
10+	45.00	46.10	49.20	52.00	54.00	57.00	58.00
11+	45.70	48.00	50.00	53.00	55.20	58.50	62.50
12+	50.00	50.00	53.70	56.00	58.00	62.00	64.30
13+	50.40	52.00	55.00	58.00	62.00	64.00	65.00
14+	52.40	55.00	58.00	62.00	65.00	67.00	68.00
15+	55.00	57.00	60.00	63.00	65.00	68.00	70.00
16+	57.00	59.00	62.00	64.00	66.00	68.00	69.90
17+	57.00	60.00	62.00	64.00	67.00	68.90	69.90
18+	59.70	61.00	63.00	66.00	68.00	69.00	69.00
19+ and above	56.30	60.00	63.00	65.00	68.00	70.00	70.00

9. Femur Bicondylar Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	68.00	69.60	72.00	75.00	78.00	80.20	82.60
9+	67.00	69.40	73.20	76.00	79.70	82.30	84.00
10+	70.00	72.00	75.20	78.00	81.70	83.90	85.90
11+	71.50	72.50	77.70	80.00	84.20	87.00	88.20
12+	76.00	78.00	81.00	83.00	86.00	90.30	94.60
13+	78.80	80.00	82.00	85.00	88.00	93.20	95.20
14+	80.00	82.00	85.00	88.00	91.00	93.10	95.00
15+	82.00	84.00	86.00	89.00	92.00	94.00	96.00
16+	79.10	81.40	86.00	90.00	92.50	95.00	95.90
17+	82.00	83.10	88.00	91.00	95.00	99.60	98.00
18+	85.50	86.70	90.20	92.50	95.70	98.00	101.00
19+ and above	82.90	85.90	88.50	92.00	94.00	95.10	99.10

10. Wrist Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	35.00	36.00	37.00	40.00	42.00	43.00	44.00
9+	34.80	36.00	38.00	40.00	42.00	43.00	45.00
10+	37.00	38.00	39.20	41.00	44.00	45.00	46.90
11+	36.00	37.00	40.00	42.00	46.00	48.00	50.00
12+	40.00	41.00	42.70	45.00	46.00	50.30	52.60
13+	41.40	42.00	45.00	47.00	49.00	52.00	52.00
14+	43.00	44.00	46.20	48.00	52.00	53.10	54.00
15+	43.50	45.00	47.00	50.00	52.00	54.00	56.00
16+	46.00	46.20	48.00	51.00	52.50	55.80	57.00
17+	43.10	47.10	49.00	51.50	53.00	55.90	59.00
18+	47.50	48.00	50.00	52.50	54.00	58.00	59.00
19+ and above	42.70	47.90	51.00	53.00	55.00	56.10	58.00

11. Ankle Diameter (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	44.80	51.60	56.00	58.00	60.00	64.00	67.20
9+	50.00	51.70	54.00	58.00	60.00	62.30	65.00
10+	53.00	54.00	57.00	60.00	62.00	65.00	67.90
11+	52.00	54.00	58.00	62.00	64.00	68.00	68.00
12+	58.00	58.70	62.00	64.00	67.20	71.30	73.60
13+	58.40	60.00	63.00	64.00	68.00	71.20	73.20
14+	62.00	62.00	64.00	68.00	70.00	73.00	73.50
15+	62.00	64.00	65.00	68.00	71.50	74.00	75.90
16+	62.00	62.10	65.00	68.00	71.00	72.90	73.90
17+	62.00	63.00	67.00	69.00	73.00	74.30	76.30
18+	63.00	65.00	68.00	71.00	73.00	75.00	78.00
19+ and above	64.00	65.00	68.00	71.00	75.00	78.00	79.10

12. Inspired Chest {Circumference} (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	57.52	59.50	61.00	63.20	66.00	67.60	68.96
9+	59.97	61.00	62.27	64.27	66.00	67.77	69.07
10+	61.00	62.00	64.00	66.80	69.00	71.00	72.76
11+	60.70	63.75	66.87	68.95	71.80	75.50	77.12
12+	65.00	66.00	68.00	70.50	73.02	77.65	82.34
13+	64.70	66.80	68.50	74.00	77.00	81.40	83.00
14+	67.35	69.72	74.50	78.50	81.75	85.55	87.10
15+	72.25	75.50	79.00	82.40	85.50	88.00	90.50
16+	73.10	77.04	79.90	84.00	86.35	88.90	89.90
17+	78.05	80.05	83.57	86.50	90.97	93.92	95.00
18+	80.73	82.01	85.00	89.00	91.57	95.00	97.59
19+ and above	86.00	86.90	90.00	92.75	96.97	99.53	104.02

13. Normal Chest Circumference (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	53.40	54.64	56.80	58.80	61.40	62.48	63.44
9+	56.22	57.04	58.40	59.80	60.97	63.80	64.29
10+	56.11	58.04	59.04	62.80	64.15	66.54	66.80
11+	54.75	57.85	61.37	64.00	66.95	70.90	71.80
12+	59.67	61.68	64.00	66.85	69.12	72.80	78.11
13+	29.48	61.64	64.90	69.00	73.80	77.38	78.50
14+	63.20	64.90	68.77	73.80	76.30	79.91	81.73
15+	66.90	69.90	73.80	77.90	80.40	82.40	85.40
16+	64.91	71.08	74.40	79.80	81.40	84.00	84.80
17+	32.40	74.62	77.25	81.40	84.80	87.99	88.78
18+	76.08	78.40	80.85	83.70	86.00	88.83	89.47
19+ and above	35.14	81.36	84.80	88.25	92.55	96.01	97.14

14. Expired Chest Diameter (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	51.80	54.20	56.80	58.00	59.40	60.20	64.00
9+	53.80	55.20	57.20	60.00	61.00	61.40	62.60
10+	56.50	57.20	58.40	60.40	62.80	65.00	67.80
11+	52.65	56.40	59.07	61.10	64.00	66.90	69.35
12+	56.35	58.35	61.00	63.80	66.00	69.23	75.72
13+	58.44	60.18	63.10	66.50	70.00	74.20	75.80
14+	60.45	62.90	66.80	70.75	74.00	77.51	78.60
15+	67.05	68.10	70.20	74.10	77.55	79.00	81.75
16+	62.46	68.16	71.55	75.50	78.00	80.16	81.91
17+	71.42	72.00	74.25	78.00	82.00	84.90	85.99
18+	70.98	73.70	76.32	80.25	82.00	86.00	87.23
19+ and above	76.09	79.54	81.02	84.00	88.37	92.00	94.69

15. Arm Girth (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	13.28	13.88	14.80	15.50	16.30	17.04	18.10
9+	13.98	14.20	14.72	15.20	16.00	16.80	17.54
10+	13.91	14.41	15.22	16.20	17.00	17.80	17.99
11+	14.30	14.90	15.37	16.50	17.42	18.50	19.12
12+	15.07	15.40	15.87	16.50	17.80	18.59	20.36
13+	15.62	16.00	17.00	17.80	19.00	20.00	21.80
14+	15.48	16.80	18.00	19.00	20.17	21.32	21.91
15+	17.10	17.80	19.00	19.90	21.35	22.00	23.15
16+	18.00	18.10	19.35	21.00	21.80	23.00	23.37
17+	18.50	19.05	20.40	21.50	22.50	23.98	24.09
18+	18.92	19.47	21.00	21.95	23.07	24.66	26.50
19+ and above	20.50	20.80	22.00	23.50	24.72	26.10	28.84

16. Arm Girth Contracted (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	13.90	14.78	15.80	16.90	17.80	19.20	19.64
9+	14.98	15.17	15.82	16.80	17.75	18.40	18.66
10+	15.60	15.91	16.72	17.80	18.82	19.80	20.59
11+	15.42	16.20	16.77	18.00	19.32	20.80	21.80
12+	16.70	17.00	17.57	18.40	19.62	21.15	23.24
13+	17.18	17.68	18.60	19.60	21.30	22.22	23.84
14+	16.69	18.40	19.92	21.60	23.20	24.21	24.50
15+	19.30	20.00	21.90	22.50	23.80	25.70	26.75
16+	19.83	20.60	22.30	23.40	24.45	26.00	26.67
17+	20.42	21.40	23.32	24.50	26.00	26.98	27.96
18+	20.58	22.53	24.05	25.30	25.97	29.43	29.90
19+ and above	23.00	23.47	25.10	27.30	29.30	31.87	34.37

17. Calf Girth (cm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	19.28	19.80	21.00	21.80	23.20	25.00	25.68
9+	18.90	19.67	20.92	22.00	23.45	24.00	24.93
10+	20.11	21.00	21.80	23.20	24.00	24.99	25.49
11+	20.40	21.55	22.30	23.75	25.22	26.35	27.22
12+	22.35	22.80	23.47	24.30	25.42	27.09	28.94
13+	23.00	23.48	24.40	25.50	27.40	28.98	29.56
14+	23.78	24.75	26.00	27.60	28.67	30.41	30.80
15+	25.60	26.40	27.80	28.50	30.45	31.80	33.00
16+	26.01	26.84	27.85	29.50	31.00	31.96	32.75
17+	25.71	27.03	28.50	30.10	31.80	33.40	33.79
18+	27.59	28.81	30.00	30.90	32.17	34.59	35.80
19+ and above	28.22	29.27	30.62	32.60	34.00	36.55	39.25

18. Niceps Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	3.00	3.00	3.00	4.00	4.00	5.00
9+	2.00	3.00	3.00	4.00	4.00	4.00	5.15
10+	2.00	2.10	3.00	3.00	4.00	5.00	5.95
11+	2.00	3.00	3.00	4.00	4.00	5.00	6.25
12+	2.00	2.00	3.00	3.00	4.00	4.00	4.00
13+	2.00	2.00	3.00	3.00	4.00	4.00	4.00
14+	2.00	2.90	3.00	3.00	4.00	5.00	5.00
15+	2.00	2.00	3.00	3.00	4.00	5.00	5.50
16+	2.00	2.20	3.00	3.00	4.00	5.00	7.00
17+	3.00	3.00	3.00	3.00	4.00	4.90	5.00
18+	3.00	3.00	3.00	4.00	4.00	5.00	5.15
19+ and above	2.00	3.00	3.00	4.00	5.75	8.00	9.00

19. Triceps Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	4.00	4.00	5.00	6.00	7.00	8.00	8.00
9+	4.00	5.00	5.00	6.00	7.00	8.00	8.15
10+	4.00	4.00	5.00	6.00	7.00	8.90	11.00
11+	3.00	4.50	5.00	6.00	7.00	9.00	9.50
12+	4.00	4.00	4.00	6.00	7.00	8.00	8.00
13+	3.40	4.00	4.00	6.00	7.00	8.20	9.00
14+	4.00	4.00	5.00	6.00	7.00	8.00	8.00
15+	3.50	4.00	5.00	5.00	6.00	8.00	9.00
16+	4.00	4.00	5.00	6.00	7.00	8.00	8.90
17+	3.05	4.00	5.00	6.00	7.75	8.90	9.00
18+	4.00	4.00	5.00	6.00	8.00	8.00	12.15
19+ and above	4.00	4.00	6.00	8.00	9.00	12.00	13.55

20. Subscapular Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	3.00	3.80	4.00	4.00	5.00	5.20	6.00
9+	3.00	3.00	4.00	4.00	5.00	6.00	6.00
10+	3.00	3.00	4.00	4.00	5.00	6.00	7.00
11+	3.00	4.00	4.00	5.00	5.00	6.00	7.00
12+	3.00	3.00	4.00	4.00	5.00	6.00	6.65
13+	4.00	4.00	4.00	5.00	6.00	7.00	7.60
14+	4.00	4.00	5.00	6.00	6.00	7.00	8.00
15+	4.00	4.00	5.00	6.00	7.00	8.00	8.00
16+	4.00	5.00	5.00	6.00	7.00	8.00	8.00
17+	4.00	5.00	5.00	7.00	7.00	9.00	9.95
18+	4.00	4.00	5.00	6.00	8.00	8.30	10.05
19+ and above	4.00	7.00	4.90	9.00	11.00	14.00	19.10

21. Suprailiac Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	3.00	3.00	3.00	4.00	4.00	5.00	6.00
9+	2.85	3.00	3.00	4.00	4.00	6.00	6.00
10+	2.05	3.00	3.00	4.00	4.00	5.00	6.00
11+	2.00	3.00	3.00	4.00	5.00	6.00	7.00
12+	2.00	2.70	3.00	4.00	4.00	5.00	6.00
13+	2.00	2.00	3.00	4.00	5.00	6.00	8.00
14+	3.00	3.00	4.00	4.00	5.00	6.00	7.00
15+	3.00	3.00	4.00	4.00	5.50	8.00	8.50
16+	3.00	3.20	4.00	5.00	6.00	8.00	8.00
17+	3.00	3.10	4.00	5.00	6.00	8.00	8.00
18+	3.00	4.00	4.00	5.00	6.00	8.00	12.30
19+ and above	3.00	3.00	4.00	6.00	9.00	11.00	13.55

22. Calf Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	3.00	3.00	4.00	5.00	6.00	8.00	8.00
9+	3.00	3.70	4.00	4.00	6.00	7.00	8.15
10+	3.00	3.10	4.00	6.00	7.00	8.00	9.00
11+	3.75	4.00	4.00	6.00	7.00	8.00	8.25
12+	3.00	4.00	4.00	5.00	6.25	8.00	9.00
13+	3.40	4.00	5.00	6.00	7.00	8.00	9.60
14+	3.45	4.00	5.00	6.00	7.00	8.00	9.00
15+	4.00	4.00	5.00	6.00	7.00	8.00	9.50
16+	3.10	4.00	5.00	6.00	7.00	8.00	9.00
17+	2.05	4.00	5.00	6.00	7.00	9.00	11.00
18+	4.00	4.00	5.00	6.00	7.00	9.00	12.00
19+ and above	3.45	4.00	4.25	6.00	8.00	12.00	14.55

23. Forearm Skinfold (mm)

Age (in years)	Percentiles						
	5	10	25	50	75	90	95
8+	2.00	2.00	3.00	4.00	4.00	5.00	6.00
9+	2.00	2.00	3.00	4.00	4.00	5.00	5.00
10+	2.05	3.00	3.00	4.00	5.00	6.00	6.00
11+	3.00	3.00	3.00	4.00	5.00	5.50	6.00
12+	2.00	3.00	3.00	4.00	4.00	5.00	5.65
13+	2.00	3.00	3.00	3.00	4.00	5.25	6.60
14+	2.45	3.00	3.00	4.00	4.00	5.00	5.00
15+	3.00	3.00	3.00	3.00	4.00	4.40	5.50
16+	2.10	3.00	3.00	3.00	4.00	4.00	5.00
17+	3.00	3.00	3.00	4.00	4.00	4.00	5.00
18+	2.00	3.00	3.00	4.00	4.00	5.00	5.15
19+ and above	2.45	3.00	3.00	4.00	5.00	6.00	6.55