

Parent Specific Adjustments for Evaluation of Length and Stature

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Ross Growth & Development Program

Recumbent length and stature (standing height) are affected by both genetic and nongenetic factors. The genetic component should be considered when concern arises that diet or disease may have retarded or accelerated growth. Adjustment of length or stature or take parental stature into account may help identify or explain the nature of a growth problem. Such adjustment may prompt diagnostic studies or suggest a genetic basis for the growth problem.

Parent-specific adjustment procedures have been developed for US children by Himes, Roche, and Thissen.^{1,2} The accompanying tables of adjustments are adapted from their research. Parent-specific adjustments need not be done routinely but should be considered when a child has unusual length or stature. As a guideline for applying parent-specific adjustments, “unusual” may be defined as below the 5th percentile or above the 95th percentile in length or stature for age.

Occasionally, a child’s length or stature may appear normal, but he parents (one or both) are very tall or very short. Under such circumstances, parent-specific adjustment also is appropriate. Rapid decrease or increase in a child’s percentile for length or stature generally is not an indication for applying parent-specific adjustments because the cause is more likely to be nongenetic than genetic.

1. Himes JH, Roche AF, Thissen D: Parent-Specific Adjustments for Assessment of Recumbent Length and Stature, Monographs in Paediatrics. Basel, Switzerland: S Karger, 1981, vol 13.
2. Himes JH, Roche AF, Thissen D, Moore WM: Parent-specific adjustments for evaluation of recumbent length and stature of children. Pediatrics 75:304-313,1985.

Table 1. Metric Equivalents (cm) for Length and Stature

INCHES	0	¼	½	¾	INCHES	0	¼	½	¾	INCHES	0	¼	½	¾
12	30.5	31.1	31.7	32.4	36	91.4	92.1	92.7	93.3	60	152.4	153.0	153.7	154.3
13	33.0	33.7	34.3	34.9	37	94.0	94.6	95.2	95.9	61	154.9	155.6	156.2	156.8
14	35.6	36.2	36.8	37.5	38	96.5	97.2	97.8	98.4	62	157.5	158.1	158.7	159.4
15	38.1	38.7	39.4	40.0	39	99.1	99.7	100.3	101.0	63	160.0	160.7	161.3	161.9
16	40.6	41.3	41.9	42.5	40	101.6	102.2	102.9	103.5	64	162.6	163.2	163.8	164.8
17	43.2	43.8	44.4	45.1	41	104.1	104.8	105.4	106.0	65	165.1	165.7	166.4	167.0
18	45.7	46.4	47.0	47.5	42	106.7	107.3	107.9	108.6	66	167.6	168.3	168.9	169.5
19	48.3	48.9	49.5	50.2	43	109.2	109.9	110.5	111.1	67	170.2	170.8	171.4	172.1
20	50.8	51.4	52.1	52.7	44	111.8	112.4	113.0	113.7	68	172.7	173.4	174.0	174.6
21	53.3	54.0	54.6	55.2	45	114.3	114.9	115.6	116.2	69	175.3	175.9	176.5	177.2
22	55.9	56.5	57.1	57.8	46	116.8	117.5	118.1	118.7	70	177.8	178.4	179.1	179.7
23	58.4	59.1	59.7	60.3	47	119.4	120.0	120.6	121.3	71	180.3	181.0	181.6	182.2
24	61.0	61.6	62.2	62.9	48	121.9	122.6	123.2	123.8	72	182.9	183.5	184.1	184.8
25	63.5	64.1	64.8	65.4	49	124.5	125.1	125.7	126.4	73	185.4	186.1	186.7	187.3
26	66.0	66.7	67.3	67.9	50	127.0	127.6	128.3	128.9	74	188.0	188.6	189.2	189.9
27	68.6	69.2	69.8	70.5	51	129.5	130.2	130.8	131.4	75	190.5	191.1	191.8	192.4
28	71.1	71.8	72.4	73.0	52	132.1	132.7	133.3	134.0	76	193.0	193.7	194.3	194.9
29	73.7	74.3	74.9	75.6	53	134.6	135.3	135.9	136.5	77	195.6	196.2	196.8	197.5
30	76.2	76.8	77.5	78.1	54	137.2	137.8	138.4	139.1	78	198.1	198.8	199.4	200.0
31	78.7	79.4	80.0	80.6	55	139.7	140.3	141.0	141.6	79	200.7	201.3	201.9	202.6
32	81.3	81.9	82.5	83.2	56	142.2	142.9	143.5	144.1	80	203.2	203.8	204.5	205.1
33	83.5	84.5	85.1	85.7	57	144.8	145.4	146.0	146.7	81	205.7	206.4	207.0	207.6
34	86.4	87.0	87.6	88.3	58	147.3	148.0	148.6	149.2	82	208.3	208.9	209.5	210.2
35	88.9	89.5	90.2	90.8	59	149.9	150.5	151.1	151.8	83	210.8	211.5	212.1	212.7

Parent Specific Adjustments for Evaluation of Length and Stature (continued)

Instructions

1. Measure and record mother's stature.
2. Measure and record father's stature.
3. *Ross Labs provides instructions for when only one parent's height is known. We recommend adjusting for mid-parental height only when both parents' heights are known.*
4. Calculate midparent stature by adding the mother's stature and the father's stature in cm and dividing by two. Metric equivalents for stature are shown in Table 1.
5. Measure, record, and plot the boy's length (birth to 36 months) or stature (3 to 18 years) in cm on the appropriate growth chart that displays percentiles. Metric equivalents for length and stature are shown in Table 1.
6. Calculate the boy's adjusted length or stature by using the parent-specific adjustments from Table 2 for length or from Table 3 for stature:
 - a. Locate the age closest to that achieved by the boy.
 - b. For that age, locate the horizontal row that includes the boy's length or stature.
 - c. Locate the vertical column closest to the midparent stature for the boy's mother and father.
 - d. The parent-specific adjustment (in cm) appears at the row-column intersection.
 - e. Add the parent-specific adjustment to the boy's length or stature if the factor has no sign; subtract the adjustment if it has a minus sign.
7. Determine the boy's parent-specific adjusted percentile by plotting adjusted length or stature on the appropriate growth chart. Clearly label plotted measurements as being actual or adjusted values.

Example #1:

- Boy aged 12 months, length 28 inches.
 - Mother's stature 60.5 inches.
 - Father's stature 65.25 inches.
 - Son's actual length in cm is 71.1 (from Table 1).
 - Son's actual percentile is below the 5th percentile. (from NCHS 1979 growth chart)
 - Mother's stature in cm is 153.7 (From Table 1).
 - Father's stature in cm is 165.7 (from Table 1).
 - Mid-parent stature is $(153.7 + 165.7) / 2 = 159.7$ cm.
 - Adjustment is +2 cm (from Table 2).
 - Son's adjusted length is $71.1 \text{ cm} + 2 \text{ cm} = 73.1$ cm.
 - Son's adjusted percentile is between the 10th and 25th percentile (from NCHS 1979 growth chart).
- Interpretation: Probably genetically short. Consider additional contributing factors.

Interpretation: A boy at a low percentile for actual length or stature whose parents are short probably is genetically short. However, his shortness, particularly if it is extreme, may have additional contributing factors that should be considered.

If the boy's adjusted percentile is low, his growth probably has been slowed by nongenetic factors, and diagnostic studies should be considered. If the parents are tall, the boy's adjusted percentile will be lower than his actual percentile, and his shortness is more likely due to malnutrition or disease.

A boy at a high adjusted percentile for length or stature most often will be found to have accelerated maturation. Rarely, a specific disorder such as Marfan's syndrome or pituitary gigantism may be responsible for the boy's unusual length or stature.

Follow-up: Counseling may be advisable when a boy is judged to be genetically short or tall. Additional contributing factors should be considered and growth monitored to confirm the relative stability of the boy's length or stature percentile.

Further investigation and modification of diet or specific therapy are indicated for a boy with unusual length or stature due to malnutrition or disease. Growth should be monitored to evaluate the effectiveness of dietary management or drug therapy.

Parent Specific Adjustments for Evaluation of Length and Stature

Boys from Birth to 36 Months

Table 2

Age (months)	Length (cm)	Midparent Stature (cm)																	
		150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184
Birth	40.0–43.9	2	1	1	1	1	1	1	0	0	0	0	0	0	-1	-1	-1	-1	-1
	44.0–52.9	2	2	1	1	1	1	1	0	0	0	0	0	0	-1	-1	-1	-1	-1
	53.0–56.9	2	2	1	1	1	1	1	1	0	0	0	0	0	-1	-1	-1	-1	-1
1	40.0–44.9	2	2	1	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	-2	-2
	45.0–48.9	2	2	2	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	-2	-2
	49.0–52.9	2	2	2	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	-2	-2
	53.0–56.9	2	2	2	2	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	-2
	57.0–62.9	2	2	2	2	1	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-2
	3	52.0–56.9	3	2	2	2	1	1	1	0	0	0	-1	-1	-1	-1	-2	-2	-2
57.0–60.9		3	2	2	2	2	1	1	0	0	0	0	-1	-1	-1	-2	-2	-2	
61.0–66.9		3	3	2	2	2	1	1	1	0	0	0	-1	-1	-1	-1	-2	-2	
67.0–68.9		3	3	2	2	2	2	1	1	1	0	0	0	-1	-1	-1	-2	-2	
6	62.0–64.9	3	3	2	2	2	1	1	1	0	0	0	-1	-1	-1	-2	-2	-2	-3
	65.0–66.9	3	3	3	2	2	2	1	1	0	0	-1	-1	-1	-2	-2	-2	-2	-3
	67.0–73.9	3	3	3	2	2	2	1	1	0	0	0	-1	-1	-1	-2	-2	-2	-2
	74.0–76.9	4	3	3	3	2	2	2	1	1	1	0	0	-1	-1	-1	-2	-2	-2
9	66.0–68.9	3	3	3	2	2	1	1	1	0	0	0	-1	-1	-2	-2	-2	-3	-3
	69.0–72.9	4	3	3	3	2	2	1	1	0	0	-1	-1	-1	-2	-2	-2	-3	-3
	73.0–76.9	4	3	3	3	2	2	2	1	1	0	0	0	-1	-1	-1	-2	-2	-3
	77.0–80.9	4	4	3	3	3	2	2	1	1	1	0	0	-1	-1	-2	-2	-2	-2
12	67.0–71.9	4	3	3	2	2	2	1	1	0	0	-1	-1	-1	-2	-2	-3	-3	-3
	72.0–74.9	4	4	3	3	2	2	1	1	0	0	-1	-1	-1	-2	-2	-3	-3	-3
	75.0–78.9	4	4	3	3	2	2	2	1	1	0	0	0	-1	-1	-2	-2	-3	-3
	79.0–82.9	4	4	3	3	3	2	2	1	1	1	0	0	-1	-1	-1	-2	-2	-3
	83.0–84.9	4	4	4	3	3	2	2	2	1	1	0	0	-1	-1	-1	-2	-2	-3
18	73.0–75.9	4	4	3	3	2	2	1	1	0	0	-1	-1	-2	-2	-2	-3	-3	-4
	76.0–80.9	4	4	3	3	2	2	2	1	1	0	0	-1	-1	-2	-2	-3	-3	-4
	81.0–84.9	5	4	4	3	3	2	2	1	1	0	0	-1	-1	-2	-2	-3	-3	-3
	85.0–88.9	5	4	4	3	3	2	2	1	1	1	0	0	-1	-1	-2	-2	-3	-3
	89.0–92.9	5	5	4	4	3	3	2	2	1	1	0	0	-1	-1	-2	-2	-2	-3
24	78.0–82.9	5	4	4	3	3	2	2	1	0	0	-1	-1	-2	-2	-3	-3	-4	-5
	83.0–86.9	5	5	4	4	3	2	2	1	1	0	0	-1	-2	-2	-3	-3	-4	-4
	87.0–92.9	6	5	5	4	3	3	2	2	1	1	0	-1	-1	-2	-2	-3	-3	-4
	93.0–96.9	6	5	5	4	4	3	3	2	1	1	0	0	-1	-1	-2	-3	-3	-4
30	85.0–88.9	6	5	5	4	3	3	2	1	1	0	-1	-1	-2	-3	-3	-4	-4	-5
	89.0–92.9	6	5	5	4	4	3	2	2	1	0	0	-1	-2	-2	-3	-3	-4	-5
	93.0–96.9	6	6	5	4	4	3	3	2	1	1	0	-1	-1	-2	-3	-3	-4	-5
	97.0–100.9	7	6	5	5	4	3	3	2	2	1	0	0	-1	-2	-2	-3	-4	-4
36	88.0–90.9	6	6	5	4	3	3	2	1	1	0	-1	-1	-2	-3	-4	-4	-5	-6
	91.0–94.9	6	6	5	4	4	3	2	2	1	0	-1	-1	-2	-3	-3	-4	-5	-5
	95.0–98.9	7	6	5	5	4	3	3	2	1	0	-1	-1	-2	-3	-4	-4	-5	-5
	99.0–102.9	7	6	6	5	4	4	3	2	1	1	0	-1	-1	-2	-3	-3	-4	-5
	103.0–106.9	7	7	6	5	5	4	3	2	2	1	0	0	-1	-2	-2	-3	-4	-4

*Adapted from Himes JH, Roche AF, Thissen D: Parent-Specific Adjustments for Assessment of Recumbent Length and Stature. Monographs in Paediatrics. Basel, Switzerland: S Karger, 1981, Vol. 13, Table XII, pp 36-37.

Parent Specific Adjustments for Evaluation of Length and Stature Boys from 3 to 18 Years

Table 3

Age (years)	Stature (cm)	Midparent Stature (cm)																	
		150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184
3	86.0 – 87.9	7	6	5	5	4	3	2	1	1	0	-1	-2	-3	-3	-4	-5	-6	-7
	88.0 – 97.9	8	7	6	5	4	4	3	2	1	0	-1	-1	-2	-3	-4	-5	-5	-6
	98.0 – 106.9	8	8	7	6	5	4	4	3	2	1	0	0	-1	-2	-3	-4	-4	-5
4	90.0 – 93.9	7	6	5	4	4	3	2	1	0	-1	-1	-2	-3	-4	-5	-5	-6	-7
	94.0 – 103.9	8	7	6	5	4	3	3	2	1	0	-1	-1	-2	-3	-4	-5	-6	-6
	104.0 – 112.9	8	8	7	6	5	4	3	3	2	1	0	-1	-1	-2	-3	-4	-5	-6
5	96.0 – 103.9	8	7	6	5	4	3	2	1	0	0	-1	-2	-3	-4	-5	-6	-7	-8
	104.0 – 113.9	9	8	7	6	5	4	3	2	1	0	0	-1	-2	-3	-4	-5	-6	-7
	114.0 – 122.9	9	9	8	7	6	5	4	3	2	1	0	0	-1	-2	-3	-4	-5	-6
6	102.0 – 111.9	8	7	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8
	112.0 – 121.9	9	8	7	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7
	122.0 – 130.9	10	9	8	7	6	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6
7	108.0 – 117.9	9	8	7	6	5	4	3	2	1	0	-1	-2	-4	-5	-6	-7	-8	-9
	118.0 – 127.9	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-4	-5	-6	-7	-8
	128.0 – 136.9	12	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-4	-5	-6	-7
8	114.0 – 115.9	10	9	8	6	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-8	-9	-10
	116.0 – 125.9	11	9	8	7	6	5	4	2	1	0	-1	-2	-3	-5	-6	-7	-8	-9
	126.0 – 135.9	12	10	9	8	7	6	5	3	2	1	0	-1	-2	-4	-5	-6	-7	-8
9	136.0 – 144.9	13	12	10	9	8	7	6	5	3	2	1	0	-1	-2	-4	-5	-6	-7
	120.0 – 121.9	11	9	8	7	6	4	3	2	1	0	-2	-3	-4	-5	-7	-8	-9	-10
	122.0 – 131.9	11	10	9	8	6	5	4	3	1	0	-1	-2	-3	-5	-6	-7	-8	-10
10	132.0 – 141.9	12	11	10	9	7	6	5	4	2	1	0	-1	-2	-4	-5	-6	-7	-9
	142.0 – 150.9	13	12	11	10	8	7	6	5	4	2	1	0	-1	-3	-4	-5	-6	-7
	124.0 – 127.9	11	10	9	7	6	5	3	2	1	-1	-2	-3	-5	-6	-7	-9	-10	-11
11	128.0 – 137.9	12	11	10	8	7	6	4	3	2	0	-1	-2	-4	-5	-6	-8	-9	-10
	138.0 – 147.9	13	12	11	9	8	7	5	4	3	1	0	-1	-3	-4	-5	-7	-8	-9
	148.0 – 158.9	14	13	12	11	9	8	7	5	4	3	1	0	-1	-3	-4	-5	-7	-8
12	128.0 – 133.9	12	10	9	8	6	5	4	2	1	0	-2	-3	-5	-6	-7	-9	-10	-11
	134.0 – 143.9	12	11	10	8	7	6	4	3	2	0	-1	-2	-4	-5	-6	-8	-9	-10
	144.0 – 153.9	14	12	11	10	8	7	5	4	3	1	0	-1	-3	-4	-5	-7	-8	-9
13	154.0 – 162.9	15	13	12	11	9	8	7	5	4	3	1	0	-2	-3	-4	-6	-7	-8
	132.0 – 141.9	12	10	9	8	6	5	4	2	1	0	-2	-3	-4	-6	-7	-8	-10	-11
	142.0 – 151.9	13	11	10	9	7	6	5	3	2	1	-1	-2	-3	-5	-6	-7	-9	-10
14	152.0 – 161.9	13	12	11	9	8	7	5	4	3	1	0	-1	-2	-4	-5	-6	-8	-9
	162.0 – 170.9	14	13	12	10	9	8	6	5	4	2	1	0	-2	-3	-4	-6	-7	-8
	136.0 – 139.9	12	10	9	8	6	5	4	2	1	-1	-2	-3	-5	-6	-7	-9	-10	-12
15	140.0 – 149.9	12	11	10	8	7	6	4	3	1	0	-1	-3	-4	-6	-7	-8	-10	-11
	150.0 – 159.9	13	12	10	9	8	6	5	4	2	1	-1	-2	-3	-5	-6	-7	-9	-10
	160.0 – 169.9	14	13	11	10	8	7	6	4	3	2	0	-1	-3	-4	-5	-7	-8	-9
16	170.0 – 178.9	15	13	12	11	9	8	6	5	4	2	1	0	-2	-3	-5	-6	-7	-9
	142.0 – 145.9	13	11	10	8	7	5	4	2	1	-1	-2	-4	-5	-7	-8	-10	-11	-13
	146.0 – 155.9	14	12	11	9	8	6	5	3	1	0	-2	-3	-5	-6	-8	-9	-11	-12
17	156.0 – 165.9	15	13	11	10	8	7	5	4	2	1	-1	-2	-4	-5	-7	-8	-10	-11
	166.0 – 175.9	15	14	12	11	9	8	6	5	3	2	0	-1	-3	-4	-6	-7	-9	-11
	176.0 – 184.9	16	15	13	12	10	9	7	6	4	3	1	-1	-2	-4	-5	-7	-8	-10
18	148.0 – 151.9	14	13	11	9	7	6	4	2	0	-1	-3	-5	-7	-8	-10	-12	-14	-15
	152.0 – 161.9	15	14	12	10	8	7	5	3	1	0	-2	-4	-6	-7	-9	-11	-13	-14
	162.0 – 171.9	17	15	13	11	10	8	6	4	3	1	-1	-3	-4	-6	-8	-10	-11	-13
18	172.0 – 181.9	18	16	14	13	11	9	7	6	4	2	0	-1	-3	-5	-7	-8	-10	-12
	182.0 – 190.9	19	17	16	14	12	10	9	7	5	3	2	0	-2	-4	-5	-7	-9	-11
	156.0 – 163.9	17	15	13	11	9	7	5	3	1	-1	-3	5	7	-9	-11	-13	-16	-18
18	164.0 – 173.9	19	17	15	13	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12	-14	-16
	174.0 – 183.9	21	19	17	15	12	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12	-14
	184.0 – 192.9	23	21	19	17	14	12	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12
18	162.0 – 165.9	17	15	13	11	9	7	4	2	0	-2	-4	-7	-9	-11	-13	-15	-17	-20
	166.0 – 175.9	20	17	15	13	11	9	6	4	2	0	-2	-4	-7	-9	-11	-13	-15	-18
	176.0 – 185.9	22	20	18	16	13	11	9	7	5	3	0	-2	-4	-6	-8	-11	-13	-15
18	186.0 – 194.9	25	23	20	18	16	14	12	9	7	5	3	1	-1	-4	-6	-8	-10	-12
	160.0 – 165.9	18	16	13	11	9	6	4	2	0	-3	-5	-7	-10	-12	-14	-17	-19	-21
	166.0 – 175.9	20	18	16	13	11	9	7	4	2	0	-3	-5	-7	-10	-12	-14	-17	-19
18	176.0 – 185.9	23	21	19	16	14	12	9	7	5	3	0	-2	-4	-7	-9	-11	-14	-16
	186.0 – 194.9	26	24	22	19	17	15	12	10	8	6	3	1	-1	-4	-6	-8	-11	-13

Parent Specific Adjustments for Evaluation of Length and Stature

Girls from Birth to 36 Months

Table 4

Age (months)	Length (cm)	Midparent Stature (cm)																	
		150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184
Birth	40.0–42.9	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1
	43.0–50.9	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1
	51.0–54.9	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	46.0–56.9	1	1	1	1	1	1	0	0	0	0	0	0	0	-1	-1	-1	-1	
	57.0–58.9	1	1	1	1	1	1	1	0	0	0	0	0	0	-1	-1	-1	-1	
3	52.0–54.9	2	2	1	1	1	1	0	0	0	0	0	-1	-1	-1	-1	-2	-2	
	55.0–60.9	2	2	2	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	-2	
	61.0–66.9	2	2	2	2	1	1	1	1	0	0	0	0	-1	-1	-1	-1	-1	
6	58.0–60.9	3	2	2	2	1	1	1	1	0	0	0	-1	-1	-1	-2	-2	-2	-3
	61.0–63.9	3	3	2	2	2	1	1	1	0	0	0	-1	-1	-1	-2	-2	-2	-2
	64.0–68.9	3	3	2	2	2	1	1	1	0	0	0	-1	-1	-1	-2	-2	-2	-2
	69.0–72.9	3	3	3	2	2	2	1	1	1	0	0	0	-1	-1	-1	-1	-2	-2
9	64.0–66.9	4	3	3	2	2	2	1	1	0	0	0	-1	-1	-2	-2	-3	-3	-3
	67.0–70.9	4	3	3	3	2	2	1	1	1	0	0	-1	-1	-1	-2	-2	-3	-3
	71.0–73.9	4	4	3	3	2	2	2	1	1	0	0	0	-1	-1	-2	-2	-2	-3
	74.0–76.9	4	4	3	3	3	2	2	1	1	1	0	0	-1	-1	-1	-2	-2	-3
12	66.0–68.9	4	4	3	3	2	2	1	1	0	0	-1	-1	-2	-2	-3	-3	-4	-4
	69.0–72.9	4	4	3	3	2	2	1	1	1	0	0	-1	-1	-2	-2	-3	-3	-4
	73.0–77.9	5	4	4	3	3	2	2	1	1	0	0	-1	-1	-2	-2	-3	-3	-4
	78.0–82.9	5	5	4	4	3	3	2	2	1	1	0	0	-1	-1	-2	-2	-3	-3
18	74.0–76.9	5	4	4	3	2	2	1	1	0	0	-1	-1	-2	-2	-3	-4	-4	-5
	77.0–80.9	5	4	4	3	3	2	2	1	1	0	0	-1	-2	-2	-3	-3	-4	-4
	81.0–84.9	5	5	4	4	3	3	2	2	1	0	0	-1	-1	-2	-2	-3	-3	-4
	85.0–88.9	6	6	5	4	4	3	2	2	1	1	0	0	-1	-1	-2	-2	-3	-4
24	77.0–80.9	5	4	4	3	3	2	1	1	0	0	-1	-2	-2	-3	-3	-4	-5	-5
	81.0–84.9	5	5	4	4	3	2	2	1	1	0	-1	-1	-2	-2	-3	-4	-4	-5
	85.0–88.9	6	5	5	4	4	3	2	2	1	0	0	-1	-1	-2	-3	-3	-4	-4
	89.0–92.9	6	6	5	4	4	3	3	2	1	1	0	-1	-1	-2	-2	-3	-3	-4
	93.0–94.9	7	6	5	5	4	4	3	2	2	1	1	0	-1	-1	-2	-2	-3	-4
30	83.0–84.9	6	5	4	4	3	2	2	1	0	0	-1	-2	-2	-3	-4	-4	-5	-6
	85.0–89.9	6	5	5	4	3	3	2	1	1	0	-1	-1	-2	-3	-3	-4	-5	-5
	90.0–94.9	7	6	5	5	4	3	3	2	1	1	0	-1	-1	-2	-3	-3	-4	-5
	95.0–97.9	7	6	6	5	4	4	3	2	2	1	0	0	-1	-2	-2	-3	-4	-4
36	87.0–88.9	6	5	5	4	3	3	2	1	0	0	-1	-2	-2	-3	-4	-5	-5	-6
	89.0–92.9	6	6	5	4	4	3	2	1	1	0	-1	-2	-2	-3	-4	-4	-5	-6
	93.0–96.9	7	6	5	5	4	3	2	2	1	0	0	-1	-2	-3	-3	-4	-5	-5
	97.0–100.9	7	7	6	5	4	4	3	2	1	1	0	-1	-1	-2	-3	-4	-4	-5
	101.0–104.9	8	7	6	6	5	4	4	3	2	1	0	0	-1	-1	-2	-3	-4	-4

Parent Specific Adjustments for Evaluation of Length and Stature

Girls from 3 to 18 Years

Table 5

Age (years)	Stature (cm)	Midparent Stature (cm)																	
		150	152	154	156	158	160	162	164	166	168	170	172	174	176	178	180	182	184
3	82.0 – 83.9	6	5	4	4	3	2	1	1	0	-1	-1	-2	-3	-3	-4	-5	-6	-6
	84.0 – 93.9	6	6	5	4	3	3	2	1	1	0	-1	-1	-2	-3	-4	-4	-5	-6
	94.0 – 102.9	7	7	6	5	4	4	3	2	2	1	0	-1	-1	-2	-3	-3	-4	-5
4	92.0 – 93.9	6	6	5	4	3	3	2	1	0	0	-1	-2	-3	-3	-4	-5	-6	-7
	94.0 – 103.9	7	6	6	5	4	3	2	2	1	0	-1	-1	-2	-3	-4	-4	-5	-6
	104.0 – 112.9	8	7	7	6	5	4	3	3	2	1	0	0	-1	-2	-3	-3	-4	-5
5	100.0 – 101.9	8	7	6	5	4	3	2	1	1	0	-1	-2	-3	-4	-5	-5	-6	-7
	102.0 – 111.9	8	7	6	6	5	4	3	2	1	0	-1	-1	-2	-3	-4	-5	-6	-7
	112.0 – 120.9	9	8	7	7	6	5	4	3	2	1	1	0	-1	-2	-3	-4	-5	-6
6	106.0 – 109.9	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8
	110.0 – 119.9	9	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7
	120.0 – 128.9	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6
7	112.0 – 117.9	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8
	118.0 – 127.9	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7
	128.0 – 136.9	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6
8	116.0 – 123.9	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-8	-9
	124.0 – 133.9	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-7	-8
	134.0 – 142.9	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-6	-7
9	122.0 – 131.9	10	9	8	7	6	5	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-9
	132.0 – 141.9	11	10	9	8	7	6	4	3	2	1	0	-1	-2	-3	-4	-5	-7	-8
	142.0 – 150.9	12	11	10	9	8	6	5	4	3	2	1	0	-1	-2	-3	-5	-6	-7
10	126.0 – 127.9	10	9	7	6	5	4	3	2	1	0	-1	-2	-3	-5	-6	-7	-8	-9
	128.0 – 137.9	10	9	8	7	6	5	4	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8
	138.0 – 147.9	11	10	9	8	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-7	-8
11	148.0 – 156.9	12	10	9	8	7	6	5	4	3	2	1	0	-1	-3	-4	-5	-6	-7
	130.0 – 133.9	10	9	8	6	5	4	3	2	1	0	-1	-2	-3	-4	-6	-7	-8	-9
	134.0 – 143.9	10	9	8	7	6	5	4	3	1	0	-1	-2	-3	-4	-5	-6	-7	-8
12	144.0 – 153.9	11	10	9	7	6	5	4	3	2	1	0	-1	-2	-3	-5	-6	-7	-8
	154.0 – 162.9	11	10	9	8	7	6	5	4	3	1	0	-1	-2	-3	-4	-5	-6	-7
	134.0 – 139.9	10	9	8	7	6	5	3	2	1	0	-1	-3	-4	-5	-6	-7	-8	-10
13	140.0 – 149.9	11	10	9	7	6	5	4	3	2	1	-1	-2	-3	-4	-6	-7	-8	-9
	150.0 – 159.9	12	10	9	8	7	6	5	3	2	1	0	-1	-3	-4	-5	-6	-7	-8
	160.0 – 168.9	12	11	10	9	8	6	5	4	3	2	0	-1	-2	-3	-4	-5	-7	-8
14	140.0 – 145.9	10	9	8	7	6	4	3	2	1	0	-1	-3	-4	-5	-6	-7	-8	-10
	146.0 – 155.9	11	10	9	7	6	5	4	3	2	0	-1	-2	-3	-4	-6	-7	-8	-9
	156.0 – 165.9	12	10	9	8	7	6	5	3	2	1	0	-1	-3	-4	-5	-6	-7	-8
15	166.0 – 174.9	12	11	10	9	8	6	5	4	3	2	1	-1	-2	-3	-4	-5	-7	-8
	146.0 – 149.9	10	9	8	6	5	4	3	2	1	0	-1	-3	-4	-5	-6	-7	-8	-9
	150.0 – 159.9	11	9	8	7	6	5	4	3	1	0	-1	-2	-3	-4	-5	-7	-8	-9
16	160.0 – 169.9	11	10	9	8	7	6	5	3	2	1	0	-1	-2	-3	-5	-6	-7	-8
	170.0 – 178.9	12	11	10	9	8	6	5	4	3	2	1	0	-2	-3	-4	-5	-6	-7
	146.0 – 151.9	10	9	8	7	5	4	3	2	1	-1	-2	-3	-4	-5	-6	-8	-9	-10
17	152.0 – 161.9	11	10	9	7	6	5	4	3	1	0	-1	-2	-3	-4	-6	-7	-8	-9
	162.0 – 171.9	12	11	10	8	7	6	5	4	2	1	0	-1	-2	-4	-5	-6	-7	-8
	172.0 – 180.9	13	12	11	9	8	7	6	5	3	2	1	0	-1	-3	-4	-5	-6	-7
18	146.0 – 151.9	11	10	8	7	6	5	3	2	1	-1	-2	-3	-4	-6	-7	-8	-10	-11
	152.0 – 161.9	12	10	9	8	7	5	4	3	2	0	-1	-2	-4	-5	-6	-7	-9	-10
	162.0 – 171.9	13	12	10	9	8	6	5	4	3	1	0	-1	-3	-4	-5	-6	-8	-9
18	172.0 – 180.9	14	13	11	10	9	7	6	5	4	2	1	0	-2	-3	-4	-5	-7	-8
	148.0 – 153.9	11	10	9	7	6	5	3	2	1	0	-2	-3	-4	-6	-7	-8	-10	-11
	154.0 – 163.9	12	11	10	8	7	6	4	3	2	0	-1	-2	-4	-5	-6	-8	-9	-10
18	164.0 – 173.9	13	12	11	9	8	7	5	4	3	1	0	-1	-3	-4	-5	-6	-8	-9
	174.0 – 182.9	14	13	12	10	9	8	6	5	4	2	1	0	-1	-3	-4	-5	-7	-8
	148.0 – 149.9	10	9	8	7	5	4	3	2	1	-1	-2	-3	-4	-6	-7	-8	-9	-10
18	150.0 – 159.9	11	10	8	7	6	5	4	2	1	0	-1	-3	-4	-5	-6	-7	-9	-10
	160.0 – 169.9	12	11	9	8	7	6	4	3	2	1	0	-2	-3	-4	-5	-6	-8	-9
	170.0 – 178.9	13	11	10	9	8	7	5	4	3	2	1	-1	-2	-3	-4	-5	-7	-8