

**Blood pressure levels for females by age and height percentile**

BP (percentile)	Systolic BP (mmHg)							Diastolic BP (mmHg)						
	Height percentile or measured height							Height percentile or measured height						
	5%	10%	25%	50%	75%	90%	95%	5%	10%	25%	50%	75%	90%	95%
1 year														
Height (in)	29.7	30.2	30.9	31.8	32.7	33.4	33.9	29.7	30.2	30.9	31.8	32.7	33.4	33.9
Height (cm)	75.4	76.6	78.6	80.8	83.0	84.9	86.1	75.4	76.6	78.6	80.8	83.0	84.9	86.1
50 th	84	85	86	86	87	88	88	41	42	42	43	44	45	46
90 th	98	99	99	100	101	102	102	54	55	56	56	57	58	58
95 th	101	102	102	103	104	105	105	59	59	60	60	61	62	62
95 th + 12 mmHg	113	114	114	115	116	117	117	71	71	72	72	73	74	74
2 years														
Height (in)	33.4	34.0	34.9	35.9	36.9	37.8	38.4	33.4	34.0	34.9	35.9	36.9	37.8	38.4
Height (cm)	84.9	86.3	88.6	91.1	93.7	96.0	97.4	84.9	86.3	88.6	91.1	93.7	96.0	97.4
50 th	87	87	88	89	90	91	91	45	46	47	48	49	50	51
90 th	101	101	102	103	104	105	106	58	58	59	60	61	62	62
95 th	104	105	106	106	107	108	109	62	63	63	64	65	66	66
95 th + 12 mmHg	116	117	118	118	119	120	121	74	75	75	76	77	78	78
3 years														
Height (in)	35.8	36.4	37.3	38.4	39.6	40.6	41.2	35.8	36.4	37.3	38.4	39.6	40.6	41.2
Height (cm)	91.0	92.4	94.9	97.6	100.5	103.1	104.6	91.0	92.4	94.9	97.6	100.5	103.1	104.6
50 th	88	89	89	90	91	92	93	48	48	49	50	51	53	53
90 th	102	103	104	104	105	106	107	60	61	61	62	63	64	65
95 th	106	106	107	108	109	110	110	64	65	65	66	67	68	69
95 th + 12 mmHg	118	118	119	120	121	122	122	76	77	77	78	79	80	81
4 years														
Height (in)	38.3	38.9	39.9	41.1	42.4	43.5	44.2	38.3	38.9	39.9	41.1	42.4	43.5	44.2
Height (cm)	97.2	98.8	101.4	104.5	107.6	110.5	112.2	97.2	98.8	101.4	104.5	107.6	110.5	112.2
50 th	89	90	91	92	93	94	94	50	51	51	53	54	55	55
90 th	103	104	105	106	107	108	108	62	63	64	65	66	67	67
95 th	107	108	109	109	110	111	112	66	67	68	69	70	70	71

95 th + 12 mmHg	119	120	121	121	122	123	124	78	79	80	81	82	82	83
5 years														
Height (in)	40.8	41.5	42.6	43.9	45.2	46.5	47.3	40.8	41.5	42.6	43.9	45.2	46.5	47.3
Height (cm)	103.6	105.3	108.2	111.5	114.9	118.1	120.0	103.6	105.3	108.2	111.5	114.9	118.1	120.0
50 th	90	91	92	93	94	95	96	52	52	53	55	56	57	57
90 th	104	105	106	107	108	109	110	64	65	66	67	68	69	70
95 th	108	109	109	110	111	112	113	68	69	70	71	72	73	73
95 th + 12 mmHg	120	121	121	122	123	124	125	80	81	82	83	84	85	85
6 years														
Height (in)	43.3	44.0	45.2	46.6	48.1	49.4	50.3	43.3	44.0	45.2	46.6	48.1	49.4	50.3
Height (cm)	110.0	111.8	114.9	118.4	122.1	125.6	127.7	110.0	111.8	114.9	118.4	122.1	125.6	127.7
50 th	92	92	93	94	96	97	97	54	54	55	56	57	58	59
90 th	105	106	107	108	109	110	111	67	67	68	69	70	71	71
95 th	109	109	110	111	112	113	114	70	71	72	72	73	74	74
95 th + 12 mmHg	121	121	122	123	124	125	126	82	83	84	84	85	86	86
7 years														
Height (in)	45.6	46.4	47.7	49.2	50.7	52.1	53.0	45.6	46.4	47.7	49.2	50.7	52.1	53.0
Height (cm)	115.9	117.8	121.1	124.9	128.8	132.5	134.7	115.9	117.8	121.1	124.9	128.8	132.5	134.7
50 th	92	93	94	95	97	98	99	55	55	56	57	58	59	60
90 th	106	106	107	109	110	111	112	68	68	69	70	71	72	72
95 th	109	110	111	112	113	114	115	72	72	73	73	74	74	75
95 th + 12 mmHg	121	122	123	124	125	126	127	84	84	85	85	86	86	87
8 years														
Height (in)	47.6	48.4	49.8	51.4	53.0	54.5	55.5	47.6	48.4	49.8	51.4	53.0	54.5	55.5
Height (cm)	121.0	123.0	126.5	130.6	134.7	138.5	140.9	121.0	123.0	126.5	130.6	134.7	138.5	140.9
50 th	93	94	95	97	98	99	100	56	56	57	59	60	61	61
90 th	107	107	108	110	111	112	113	69	70	71	72	72	73	73
95 th	110	111	112	113	115	116	117	72	73	74	74	75	75	75
95 th + 12 mmHg	122	123	124	125	127	128	129	84	85	86	86	87	87	87
9 years														
Height (in)	49.3	50.2	51.7	53.4	55.1	56.7	57.7	49.3	50.2	51.7	53.4	55.1	56.7	57.7
Height (cm)	125.3	127.6	131.3	135.6	140.1	144.1	146.6	125.3	127.6	131.3	135.6	140.1	144.1	146.6
50 th	95	95	97	98	99	100	101	57	58	59	60	60	61	61
90 th	108	108	109	111	112	113	114	71	71	72	73	73	73	73

95 th	112	112	113	114	116	117	118	74	74	75	75	75	75	75
95 th + 12 mmHg	124	124	125	126	128	129	130	86	86	87	87	87	87	87
10 years														
Height (in)	51.1	52.0	53.7	55.5	57.4	59.1	60.2	51.1	52.0	53.7	55.5	57.4	59.1	60.2
Height (cm)	129.7	132.2	136.3	141.0	145.8	150.2	152.8	129.7	132.2	136.3	141.0	145.8	150.2	152.8
50 th	96	97	98	99	101	102	103	58	59	59	60	61	61	62
90 th	109	110	111	112	113	115	116	72	73	73	73	73	73	73
95 th	113	114	114	116	117	119	120	75	75	76	76	76	76	76
95 th + 12 mmHg	125	126	126	128	129	131	132	87	87	88	88	88	88	88
11 years														
Height (in)	53.4	54.5	56.2	58.2	60.2	61.9	63.0	53.4	54.5	56.2	58.2	60.2	61.9	63.0
Height (cm)	135.6	138.3	142.8	147.8	152.8	157.3	160.0	135.6	138.3	142.8	147.8	152.8	157.3	160.0
50 th	98	99	101	102	104	105	106	60	60	60	61	62	63	64
90 th	111	112	113	114	116	118	120	74	74	74	74	74	75	75
95 th	115	116	117	118	120	123	124	76	77	77	77	77	77	77
95 th + 12 mmHg	127	128	129	130	132	135	136	88	89	89	89	89	89	89
12 years														
Height (in)	56.2	57.3	59.0	60.9	62.8	64.5	65.5	56.2	57.3	59.0	60.9	62.8	64.5	65.5
Height (cm)	142.8	145.5	149.9	154.8	159.6	163.8	166.4	142.8	145.5	149.9	154.8	159.6	163.8	166.4
50 th	102	102	104	105	107	108	108	61	61	61	62	64	65	65
90 th	114	115	116	118	120	122	122	75	75	75	75	76	76	76
95 th	118	119	120	122	124	125	126	78	78	78	78	79	79	79
95 th + 12 mmHg	130	131	132	134	136	137	138	90	90	90	90	91	91	91
13 years														
Height (in)	58.3	59.3	60.9	62.7	64.5	66.1	67.0	58.3	59.3	60.9	62.7	64.5	66.1	67.0
Height (cm)	148.1	150.6	154.7	159.2	163.7	167.8	170.2	148.1	150.6	154.7	159.2	163.7	167.8	170.2
50 th	104	105	106	107	108	108	109	62	62	63	64	65	65	66
90 th	116	117	119	121	122	123	123	75	75	75	76	76	76	76
95 th	121	122	123	124	126	126	127	79	79	79	79	80	80	81
95 th + 12 mmHg	133	134	135	136	138	138	139	91	91	91	91	92	92	93
14 years														
Height (in)	59.3	60.2	61.8	63.5	65.2	66.8	67.7	59.3	60.2	61.8	63.5	65.2	66.8	67.7
Height (cm)	150.6	153.0	156.9	161.3	165.7	169.7	172.1	150.6	153.0	156.9	161.3	165.7	169.7	172.1
50 th	105	106	107	108	109	109	109	63	63	64	65	66	66	66

90 th	118	118	120	122	123	123	123	76	76	76	76	77	77	77
95 th	123	123	124	125	126	127	127	80	80	80	80	81	81	82
95 th + 12 mmHg	135	135	136	137	138	139	139	92	92	92	92	93	93	94

15 years

Height (in)	59.7	60.6	62.2	63.9	65.6	67.2	68.1	59.7	60.6	62.2	63.9	65.6	67.2	68.1
Height (cm)	151.7	154.0	157.9	162.3	166.7	170.6	173.0	151.7	154.0	157.9	162.3	166.7	170.6	173.0
50 th	105	106	107	108	109	109	109	64	64	64	65	66	67	67
90 th	118	119	121	122	123	123	124	76	76	76	77	77	78	78
95 th	124	124	125	126	127	127	128	80	80	80	81	82	82	82
95 th + 12 mmHg	136	136	137	138	139	139	140	92	92	92	93	94	94	94

16 years

Height (in)	59.9	60.8	62.4	64.1	65.8	67.3	68.3	59.9	60.8	62.4	64.1	65.8	67.3	68.3
Height (cm)	152.1	154.5	158.4	162.8	167.1	171.1	173.4	152.1	154.5	158.4	162.8	167.1	171.1	173.4
50 th	106	107	108	109	109	110	110	64	64	65	66	66	67	67
90 th	119	120	122	123	124	124	124	76	76	76	77	78	78	78
95 th	124	125	125	127	127	128	128	80	80	80	81	82	82	82
95 th + 12 mmHg	136	137	137	139	139	140	140	92	92	92	93	94	94	94

17 years

Height (in)	60.0	60.9	62.5	64.2	65.9	67.4	68.4	60.0	60.9	62.5	64.2	65.9	67.4	68.4
Height (cm)	154.4	154.7	158.7	163.0	167.4	171.3	173.7	154.4	154.7	158.7	163.0	167.4	171.3	173.7
50 th	107	108	109	110	110	110	111	64	64	65	66	66	66	67
90 th	120	121	123	124	124	125	125	76	76	77	77	78	78	78
95 th	125	125	126	127	128	128	128	80	80	80	81	82	82	82
95 th + 12 mmHg	137	137	138	139	140	140	140	92	92	92	93	94	94	94

The 50th, 90th, and 95th percentiles were derived by using quantile regression on the basis of normal-weight children (BMI <85th percentile). BP stages are defined as elevated BP ≥90th percentile but <95th percentile; stage 1 HTN: ≥95th percentile or 130/80 to 139/89 mmHg; and stage 2 HTN: ≥95th percentile + 12 mmHg or >140/90 mmHg.

BMI: body mass index; BP: blood pressure; HTN: hypertension.

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