A Guide to

Blood Pressure Measurement in Children

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Blood pressure levels for boys and girls by age and height percentile

		BOYS Systolic BP (mmHg)			BOYS Diastolic BP (mmHg)			GIRLS Systolic BP (mmHg)			GIRLS Diastolic BP (mmHg) e of Height		
		5 th	50 th	95 th	5 th	50 th	95 th	5 th	50 th	95 th	5 th	50 th	95 th
Age (years)	BP Percentiles	,	3	3	,	00	3	•	3	3	,	3	3
1	50 th	80	85	89	34	37	39	83	86	90	38	40	42
	95 th	98	103	106	54	56	58	100	104	107	56	58	60
2	50 th	84	88	92	39	42	44	85	88	91	43	45	47
	95 th	101	106	110	59	61	63	102	105	109	61	63	65
3	50 th	86	91	95	44	46	48	86	89	93	47	49	51
	95 th	104	109	113	63	65	67	104	107	110	65	67	69
4	50 th	88	93	97	47	50	52	88	91	94	50	52	54
	95 th	106	111	115	66	69	71	105	108	112	68	70	72
5	50 th	90	95	98	50	53	55	89	93	96	52	54	56
	95 th	108	112	116	69	72	74	107	110	113	70	72	74
6	50 th	91	96	100	53	55	57	91	94	98	54	56	58
	95 th	109	114	117	72	74	76	108	111	115	72	74	76
7	50 th	92	97	101	55	57	59	93	96	99	55	57	59
	95 th	110	115	119	74	76	78	110	113	116	73	75	77
8	50 th	94	99	102	56	59	61	95	98	101	57	58	60
	95 th	111	116	120	75	78	80	112	115	118	75	76	78
9	50 th	95	100	104	57	60	62	96	100	103	58	59	61
	95 th	113	118	121	76	79	81	114	117	120	76	77	79
10	50 th	97	102	106	58	61	63	98	102	105	59	60	62
	95 th	115	119	123	77	80	82	116	119	122	77	78	80
11	50 th	99	104	107	59	61	63	100	103	107	60	61	63
40	95 th	117	121	125	78	80	82	118	121	124	78	79	81
12	50 th	101	106	110	59	62	64	102	105	109	61	62	64
42	95 th 50 th	119	123	127	78	81	83	119	123	126	79	80	82
13		104	108	112	60	62	64	104	107	110	62	63	65
14	95 th 50 th	121	126	130	79	81	83	121	124	128	80	81	83
14	95 th	106	111	115	60	63	65	106	109	112	63	64	66
15	95 th	124 109	128 113	132 117	80 61	82 64	84 66	123 107	126 110	129 113	81 64	82 65	84 67
13	95 th										_		
16	95*** 50 th	126 111	131 116	135 120	81 63	83 65	85 67	124 108	127 111	131 114	82 64	83	85 68
10	95 th	129	134		82	84	87	125	128	132		66	
17	50 th	114	118	137 122	65	67	70	108	111	115	82 64	84 66	86 68
''	95 th		_							_	_		
	95**	131	136	140	84	87	89	125	129	132	82	84	86

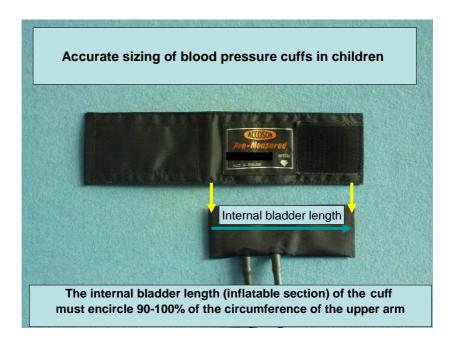
How to measure manual systolic blood pressure using a Doppler and Greenlight sphygmomanometer

- 1. Ensure the child is comfortable
- 2. Apply the cuff, ensure the internal bladder encircles 90-100% of the upper arm circumference
- 3. The arrow on the cuff should be placed over the brachial artery
- 4. The first BP reading should be estimated by placing a Doppler over the pulse and pumping up the cuff, when the pulse sound disappears this is your estimated BP, now deflate the cuff quickly
- 5. Keep the Doppler over the pulse, pump the cuff up to a pressure 30mmHq higher than the estimated BP
- 6. Reduce the pressure slowly (you should see a green light on the right hand size of the monitor, this indicates that the pressure is reduced at the correct speed)
- 7. The 1st repetitive sound is recorded as the systolic BP
- 8. If you need to repeat the BP you should wait 1 minute to give the vessels a chance to refill.
- 9. Record the systolic BP measurement immediately





To obtain a diastolic reading use a stethoscope rather than Doppler. For instructions on how to measure BP with a stethoscope, please refer to CPC guidelines available on the GOSH intranet.



Accurate sizing of the cuff is important for obtaining accurate blood pressure readings. Ensure you measure the bladder correctly, the length of the bladder is the most important measurement and must cover 90-100% of the upper arm. (This may appear too large in some children, however smaller cuffs will not adequately occlude the arterial pulse).

Measuring BP

