

# Pediatric Blood Pressure Chart

Patient's name: \_\_\_\_\_ Date of birth: \_\_\_\_\_

Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Relevant medical information (if needed):

--

Age group (weight in kg)	Age (years)	Height (cm)	Blood pressure (mmHg) (50th - 90th percentile)			
			Boys		Girls	
			Systolic	Diastolic	Systolic	Diastolic
*Infant	1-12 months	-	72 -104	37-56	72-104	37-56
Toddler (10-14kg)	1	77-87	86-101	41-54	85-102	42-58
	2	86-98	89-104	44-58	89-106	48-62
Preschooler (14-18kg)	3	92-105	90-105	47-61	90-107	50-65
	4	93-113	92-107	50-64	92-108	53-67
	5	104-120	94-110	53-67	93-110	55-70
School-age (20-42 kg)	6	111-127	90-109	59-73	91-108	59-73
	7	116-134	91-111	60-74	92-110	60-74
	8	120-140	93-113	60-75	94-112	60-75
	9	124-145	94-115	61-75	95-114	61-76
	10	130-151	96-117	62-76	97-116	62-77
	11	135-157	98-119	62-77	99-118	63-78
Adolescent (50 kg)	>13	147-172	102-124	64-80	102-121	64-79

**\*Note:** Blood pressure values in newborn infants may vary considerably during the first few weeks. The definition of HTN in preterm and term neonates also varies.

	Age <13 years	Age >13 years	Follow-up
<b>Elevated or persistent or pre-HTN</b>	90th to 95th percentile or 120/80 mm Hg to <95th percentile (whichever is lower)	120-129/<80 mm Hg	<ul style="list-style-type: none"> <li>Recheck in 6 months</li> <li>Consider school or home BP monitoring</li> </ul>
<b>Stage 1 HTN</b>	>95th to 99th percentile + 5 mmHg or 130-139/89 mm Hg (whichever is lower)	130-139/89 mm Hg	<ul style="list-style-type: none"> <li>Evaluate in 1 week to 1 month</li> </ul>
<b>Stage 2 HTN</b>	> 99th percentile + 5 mm Hg or $\geq 140/90$ mm Hg (whichever is lower)	$\geq 140/90$ mm Hg	<ul style="list-style-type: none"> <li>Evaluate in 1 week or sooner if symptomatic</li> </ul>
<b>White-coat HTN</b>	<ul style="list-style-type: none"> <li>&gt; 95th percentile in a medical setting</li> <li>Normal outside the medical setting</li> </ul>		<ul style="list-style-type: none"> <li>Consider ABPM as well as home or school BP monitoring</li> </ul>
<b>Masked HTN</b>	<ul style="list-style-type: none"> <li>&lt; 95th percentile in a medical setting</li> <li>&gt; 95th percentile outside a medical setting</li> </ul>		<ul style="list-style-type: none"> <li>Consider ABPM in high-risk patients.</li> </ul>

## Findings

## Additional notes

## References

- Banker, A., C. Bell, M. Gupta-Malhotra and J. Samuels (2016). Blood pressure percentile charts to identify high or low blood pressure in children. *BMC Pediatr* 16: 98.
- Flynn, J. T., Kaelber, D. C., Baker-Smith, C. M., Blowey, D., Carroll, A. E., Daniels, S. R., de Ferranti, S. D., Dionne, J. M., Falkner, B., Flinn, S. K., Gidding, S. S., Goodwin, C., Leu, M. G., Powers, M. E., Rea, C., Samuels, J., Simasek, M., Thaker, V. V., Urbina, E. M., & SUBCOMMITTEE ON SCREENING AND MANAGEMENT OF HIGH BLOOD PRESSURE IN CHILDREN (2017). Clinical practice guideline for screening and management of high blood pressure in children and adolescents. *Pediatrics*, 140(3), e20171904. <https://doi.org/10.1542/peds.2017-1904>
- Chen, X. and Y. Wang (2008). Tracking of blood pressure from childhood to adulthood: a systematic review and meta-regression analysis. *Circulation* 117(25): 3171-3180.
- National High Blood Pressure Education Program Working Group on High Blood Pressure in Children and Adolescents (2004). The fourth report on the diagnosis, evaluation, and treatment of high blood pressure in children and adolescents. *Pediatrics*, 114(2 Suppl 4th Report), 555–576. <https://pubmed.ncbi.nlm.nih.gov/15286277/>
- Pediatric anesthesia. (2018). In *Morgan and Mikhail's Clinical Anesthesiology* (6th ed.). McGraw-Hill Education.
- Weaver, D. J., Jr. (2017). Hypertension in Children and Adolescents. *Pediatr Rev* 38(8): 369-382.
- Weaver, D. J., Jr. (2019). Pediatric Hypertension: Review of Updated Guidelines. *Pediatr Rev* 40(7): 354-358.
- University of Iowa Healthcare. (2019). *Pediatric vital signs normal ranges / Iowa head and neck protocols*. <https://medicine.uiowa.edu/iowaprotocols/pediatric-vital-signs-normal-ranges>
- Xi, B., X. Zong, R. Kelishadi, Y. M. Hong, A. Khadilkar, L. M. Steffen, T. Nawarycz, M. Krzywinska-Wiewiorowska, H. Aounallah-Skhiri, P. Bovet, A. Chioloro, H. Pan, M. Litwin, B. K. Poh, R. Y. Sung, H. K. So, P. Schwandt, G. M. Haas, H. K. Neuhauser, L. Marinov, S. V. Galcheva, M. E. Motlagh, H. S. Kim, V. Khadilkar, A. Krzyzaniak, H. B. Romdhane, R. Heshmat, S. Chiplonkar, B. Stawinska-Witoszynska, J. El Ati, M. Qorbani, N. Kajale, P. Traissac, L. Ostrowska-Nawarycz, G. Ardalán, L. Parthasarathy, M. Zhao, T. Zhang and C. International Child Blood Pressure References Establishment (2016). Establishing international blood pressure references among nonoverweight children and adolescents Aged 6 to 17 Years. *Circulation* 133(4): 398-408.