

# Physical Growth and Measurements

## CHILD AND TEEN CHECKUPS (C&TC) FACT SHEET FOR PRIMARY CARE PROVIDERS

Physical measurements are required at all C&TC visits and differ by age. Routine and accurate measurements help monitor growth and detect growth abnormalities or associated issues.

### C&TC standards

#### General

Physical measurements are required at all C&TC visits to identify risks and prevent complex medical issues.

- Measure head circumference from birth through 24 months (or to detect deviations from the norm at any age).
- Measure the child's length (recumbent up to age 24 months) or height (standing), and weight at all ages.
- Calculate the weight for length percentile for age and sex of infants up to 2 years.
- Calculate body mass index (BMI) percentile for age and sex starting at 2 years.
- Measure blood pressure starting at 3 years.

#### Personnel

Properly trained health staff can obtain measurements. A licensed health professional (physician, nurse practitioner, physician assistant) must provide appropriate evaluation, referral, diagnosis, and treatment based on patient measurements, patterns, and history.

### Documentation

Record numerical values for head circumference, weight, length or height, weight for length or BMI percentile, and blood pressure in the child's health record.

Plot growth information on standardized charts:

- For ages birth through 24 months, use [WHO growth standards for use in US infants and children birth to 2 years](#)
- For ages 2-20 years, use [CDC Growth Charts Set 2 \(3rd-97th percentile\)](#)
- For children ages 2-20 years above the 95th percentile for BMI, use [Extended BMI-for-age Growth Charts](#)

Refer to the documentation forms on the [C&TC Early and Periodic Screening, Diagnostic, and Treatment resources](#) webpage for documentation examples or to use as a template with your electronic medical record.

### Procedure

Refer to the online training modules:

- [Introduction to Growth Chart Training](#)
- [Accurately Weighing and Measuring: Technique](#)
- [Auscultatory measurement of blood pressure in toddlers](#)

Refer to [Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents](#) for normative blood pressure tables for sex by age and height (Tables 4 and 5) and screening blood pressure values requiring further evaluation (Table 6).

## Referral

Provide appropriate intervention, education, referral, and ongoing monitoring as clinically indicated to children or adolescents with nutritional risks, elevated blood pressure, or a BMI greater than or equal to the 85th percentile.

## Importance of measurements

Routine, accurate, and reliable physical measures help detect abnormalities, monitor growth and nutritional status, and track the effects of medical or nutritional intervention.

Elevated BMI (greater than 95<sup>th</sup> percentile for age and sex) in children and adolescents is associated with significant morbidity (Hampel et al., 2023; US Preventive Services Task Force, 2017).

Measuring blood pressure enables the early detection of primary and asymptomatic secondary hypertension (HTN). This is vital, given that children have a greater relative prevalence of secondary causes of HTN (Flynn et al., 2017).

## Professional recommendations

### American Academy of Pediatrics

The following measurements are recommended at each visit: head

circumference from birth through 24 months, weight, length or height, weight for length from birth up to 24 months, BMI at 2 years and older, and blood pressure beginning at 3 years (American Academy of Pediatrics, 2025).

## Resources

### Minnesota Department of Human Services

- [C&TC Schedule of Age-Related Screening Standards](#)
- [Minnesota Health Care Programs \(MHCP\) Provider Manual - C&TC Section](#)

### Minnesota Department of Health

- [Child and Teen Checkups \(C&TC\)](#)
- [Women, Infants and Children \(WIC\) Program](#)

### Department of Children, Youth, and Families

- [Supplemental Nutrition Assistance Program \(SNAP\)](#)

## Other resources

- [About BMI](#)

## For more information

The Child and Teen Checkups (C&TC) program is administered through a partnership between the Minnesota Department of Human Services and the Minnesota Department of Health.

For questions about this fact sheet or to obtain this information in a different format, call 651-201-3650 or email [health.childteencheckups@state.mn.us](mailto:health.childteencheckups@state.mn.us).

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## Resource links

- [WHO growth standards for use in US infants and children birth to 2 years \(www.cdc.gov/growthcharts/who\\_charts.htm\)](http://www.cdc.gov/growthcharts/who_charts.htm)
- [CDC Growth Charts \(www.cdc.gov/growthcharts/clinical\\_charts.htm\)](http://www.cdc.gov/growthcharts/clinical_charts.htm)
- [Extended BMI-for-age Growth Charts \(www.cdc.gov/growthcharts/extended-bmi.htm\)](http://www.cdc.gov/growthcharts/extended-bmi.htm)
- [C&TC Early and Periodic Screening, Diagnostic, and Treatment resources \(https://mn.gov/dhs/partners-and-providers/policies-procedures/minnesota-health-care-programs/provider/types/ctc-resources\)](https://mn.gov/dhs/partners-and-providers/policies-procedures/minnesota-health-care-programs/provider/types/ctc-resources)
- [Introduction to Growth Chart Training \(https://www.cdc.gov/growth-chart-training/hcp/training/index.html\)](https://www.cdc.gov/growth-chart-training/hcp/training/index.html)
- [Accurately Weighing and Measuring: Technique \(https://depts.washington.edu/growth/module5/text/intro.htm\)](https://depts.washington.edu/growth/module5/text/intro.htm)
- [Auscultatory measurement of blood pressure in toddlers \(https://youtu.be/DewBQdAPw4c\)](https://youtu.be/DewBQdAPw4c)
- [Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents \(https://pediatrics.aappublications.org/content/140/3/e20171904\)](https://pediatrics.aappublications.org/content/140/3/e20171904)
- [C&TC Schedule of Age-Related Screening Standards \(https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3379-ENG\)](https://edocs.dhs.state.mn.us/lfserver/Public/DHS-3379-ENG)
- [Minnesota Health Care Programs \(MHCP\) Provider Manual - C&TC Section \(www.dhs.state.mn.us/main/idcplg?IdcService=GET\\_DYNAMIC\\_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16\\_150092\)](http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_150092)
- [Child and Teen Checkups \(C&TC\) \(www.health.state.mn.us/divs/cfh/program/ctc/index.cfm\)](http://www.health.state.mn.us/divs/cfh/program/ctc/index.cfm)
- [Women, Infants and Children \(WIC\) Program \(www.health.state.mn.us/people/wic/index.html\)](http://www.health.state.mn.us/people/wic/index.html)
- [Supplemental Nutrition Assistance Program \(SNAP\) \(https://dcyf.mn.gov/programs-directory/supplemental-nutrition-assistance-program-snap\)](https://dcyf.mn.gov/programs-directory/supplemental-nutrition-assistance-program-snap)
- [About BMI \(https://www.cdc.gov/bmi/about/index.html\)](https://www.cdc.gov/bmi/about/index.html)

## References

- American Academy of Pediatrics (2025, February). *Recommendations for preventive pediatric health care*. Retrieved from [https://downloads.aap.org/AAP/PDF/periodicity\\_schedule.pdf](https://downloads.aap.org/AAP/PDF/periodicity_schedule.pdf)
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- Hampel, S. E., Hassink, S. G., Skinner, A. C., Armstrong, S. C., Barlow, S. E., Bolling, C. F., Avila Edwards, K. C., Eneli, I., Hamre, R., Joseph, M. M., Lunsford, D., Mendonca, E., Michalsky, M. P., Mirza, N., Ochoa, E. R., Sharifi, M., Staiano, A. E., Weedn, A. E., Flinn, S. K., ... & Okechukwu, K. (2023). Clinical practice guideline for the evaluation and treatment of children and adolescents with obesity. *Pediatrics*, 151(2). <https://doi.org/10.1542/peds.2022-060640>
- US Preventive Services Task Force (2017). Screening for obesity in children and adolescents: US Preventive Services Task Force recommendation statement. *JAMA*, 317(23), 2417-2426. <https://doi.org/10.1001/jama.2017.6803>