

# Physical Growth and Measurements

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

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

### C&TC Requirements

#### 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 of age (or for a deviation from the norm at any age).
- Measure the child's length or height and weight at all ages.
- Calculate the weight for length percentile for age and sex for infants up to two years of age.
- Calculate body mass index (BMI) percentile for age and sex starting at two years of age.
- Measure blood pressure starting at three years of age.

#### Personnel

Health staff who have completed adequate training 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 using the [World Health Organization Growth Charts](#) for ages birth through 24 months. For ages two years and older use [Growth Charts - Clinical Growth Charts Set 1 Children 2 to 20 years \(5<sup>th</sup>-95<sup>th</sup> percentile\)](#). For children above the 95th percentile use [Extended BMI Growth Charts](#).

For documentation examples or for use as a template with your electronic medical record, refer to the [C&TC Provider Documentation Forms](#).

### Procedure

Refer to these online training modules:

- [CDC 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 screening blood pressure values requiring further evaluation in Table 6 and for

normative blood pressure tables for sex by age and height in Tables 4 and 5.

## Referral

Children or adolescents with nutritional risks, overweight, obesity, and elevated blood pressure should receive the appropriate intervention, education, referral, and ongoing monitoring as clinically indicated.

## Importance of Measurements

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

Obesity in children and adolescents is associated with multiple significant morbidities (US Preventive Services Task Force, 2017; Hampl, et al., 2023).

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 (American Academy of Pediatrics, 2017).

## Professional Recommendations

### American Academy of Pediatrics

[Recommendations for Pediatric Preventive Health Care](#) includes these measurements 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.

## Resources

### Minnesota Department of Human Services

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

### Minnesota Department of Health

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

### Centers for Disease Control and Prevention

- [About BMI for Children and Teens](#)

## References

- American Academy of Pediatrics. (2017). Clinical Practice Guideline for Screening and Management of High Blood Pressure in Children and Adolescents. *Pediatrics*, 140(3). doi:10.1542/peds.2017-1904
- Hampl, S., Hassink, S., Skinner, A., Armstrong, S., Barlow, S., Bolling, C., . . . Okechukwu, K. (2023). Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity. *Pediatrics*, 151(2). doi:10.1542/peds.2022-060640
- US Preventive Services Task Force. (2017). Screening for Obesity in Children and Adolescents. *JAMA*, 317(23), 2417-2426.

## 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).

Revised 03/2024

## Resource Links

- [C&TC Provider Documentation Forms \(https://mn.gov/dhs/partners-and-providers/policies-procedures/minnesota-health-care-programs/provider/types/ctc-resources\)](https://mn.gov/dhs/partners-and-providers/policies-procedures/minnesota-health-care-programs/provider/types/ctc-resources)
- [C&TC Fact Sheets \(http://www.health.state.mn.us/people/childrenyouth/ctc/factsheets.html\)](http://www.health.state.mn.us/people/childrenyouth/ctc/factsheets.html)
- [Teen Health Services and One-On-One Time with A Healthcare Provider \(http://www.cdc.gov/healthyyouth/healthservices/pdf/OneonOnetime\\_FactSheet.pdf\)](http://www.cdc.gov/healthyyouth/healthservices/pdf/OneonOnetime_FactSheet.pdf)
- [Bright Futures Guidelines \(http://www.aap.org/en/practice-management/bright-futures\)](http://www.aap.org/en/practice-management/bright-futures)
- [Social Needs Screening Tool \(http://www.aafp.org/dam/AAFP/documents/patient\\_care/everyone\\_project/hops19-physician-form-sdoh.pdf\)](http://www.aafp.org/dam/AAFP/documents/patient_care/everyone_project/hops19-physician-form-sdoh.pdf)
- [Foster Care Health Care Standards \(http://www.aap.org/en/patient-care/foster-care/health-care-standards\)](http://www.aap.org/en/patient-care/foster-care/health-care-standards)
- [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 \(http://www.dhs.state.mn.us/main/idcplg?IdcService=GET\\_DYNAMIC\\_CONVERSION&RevisionSelectionMethod=LatestRelease&dDocName=dhs16\\_150092\)](http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestRelease&dDocName=dhs16_150092)
- [Resources for Minnesota Families with Children \(https://mn.gov/dhs/people-](https://mn.gov/dhs/people-)

[we-serve/children-and-families/health-care/health-care-programs/resources\)](http://www.health.state.mn.us/divs/cfh/program/ctc/index.cfm)

- [Child and Teen Checkups \(C&TC\) \(http://www.health.state.mn.us/divs/cfh/program/ctc/index.cfm\)](http://www.health.state.mn.us/divs/cfh/program/ctc/index.cfm)
- [Help Me Connect \(https://helpmeconnect.web.health.state.mn.us/HelpMeConnect\)](https://helpmeconnect.web.health.state.mn.us/HelpMeConnect)