

Body Mass Index (BMI) Best Practices

BMI is a person's weight in kilograms divided by the square of height in meters. It is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems.

In children, a high amount of body fat can lead to weight-related diseases and other health issues. Being underweight is also a risk factor for health issues.

For children and teens, BMI is age- and sex-specific and is often referred to as BMI-for-age. Height and weight change as children age, as does their relation to body fatness. Consequently, a child's BMI should be interpreted relative to other children of the same sex and age. These percentiles are calculated from the [CDC growth charts](#).

The Tennessee Department of Education encourages local education agencies to conduct annual BMI screenings for all students in grades K, 2, 4, 6, 8, and one year or class of high school.

BMI screening is used to provide parents/guardians with information about their child's weight status. Data can be used to identify trends over time and monitor school policy outcomes aimed at improving student health.

Tenn. Code Ann. § 49-6-1401

(a) LEAs are authorized to implement a program that identifies public school children who are at risk for obesity. Those school systems that choose to carry out such a program shall:

- (1) Have sufficient number of current school staff or school volunteers trained in taking a body mass index (BMI) to meet the requirements of this part. The department of health shall develop and provide training materials to the LEAs;
- (2) Complete a body mass index for age (BMI-for-age), as defined by the centers for disease control and prevention, on every child enrolled for classes in the school system whose parents or guardians have not requested exclusion from the testing; and

(3) Provide each student's parents or guardians with a confidential health report card that represents the result of the child's BMI-for-age screening, along with basic educational information on what the results mean and what the parents or guardians should do with the information.

(b) School systems that carry out the program shall transmit the results of the testing for each student to the department of health.

Centers for Disease Control and Prevention (CDC) Safeguards

The CDC recommends ten safeguards as an essential part of BMI screening. Safeguards help to ensure respect for student confidentiality and privacy, protect students from potential harm, and increase the likelihood that the BMI screening will have a positive impact on promoting a healthy weight.

Safeguard 1	Introduce the program to parents, guardians, students, and school staff; ensure that there is an appropriate process in place for obtaining parental consent for measuring students' height and weight.
Safeguard 2	Ensure that staff members who measure height and weight have the appropriate expertise and training to obtain accurate and reliable results and minimize the potential for stigmatization.
Safeguard 3	Ensure that the setting for data collection is private.
Safeguard 4	Use equipment that can accurately and reliably measure height and weight.
Safeguard 5	Ensure that the BMI number is calculated and interpreted correctly.
Safeguard 6	Develop efficient data collection procedures.
Safeguard 7	Do not use the actual BMI-for-age percentiles of the students as a basis for evaluating student or teacher performance (e.g., in physical education or health education class).
Safeguard 8	Evaluate the BMI measurement program by assessing the process, intended outcomes, and unintended consequences of the program.
Safeguard 9	Ensure that resources are available for safe and effective follow-up.
Safeguard 10	Provide all parents with a clear and respectful explanation of the BMI results and a list of appropriate follow-up actions.

Additional information on each safeguard can be found in the [Health Screening Guidelines](#) on the [Coordinated School Health webpage](#) and on the [CDC Healthy Schools webpage](#).

Best Practices

Ensuring Accuracy of BMI Screening	
<i>If screening results aren't accurate and consistent, then the data cannot be relied upon. Accuracy is important in obtaining height and weight measurements because these measurements will be used to calculate the BMI which, in turn, is utilized to assess healthy weight status and/or provide for surveillance data.</i>	
Best Practice	Additional Information
Calibrate equipment.	All equipment should be maintained and calibrated regularly to ensure accuracy and reliability of results. ²
Train screeners and review screening procedures annually.	Staff who measure height and weight should have appropriate expertise and training to ensure accurate and reliable results.
Monitor screeners for correct techniques.	Quality control checks can be implemented through random visits at measurement sites to oversee the performance of the staff measuring students' height and weight. ²
Communicating BMI Results	
<i>All parents/guardians of students screened shall be provided with BMI results.¹ Parents/guardians of students categorized as underweight, overweight, or obese should receive a recommendation from the</i>	

¹ Tenn. Code Annot. 49-6-1401

school district for the student to follow up with a health care provider and share their BMI results with the provider (referral).²

Best Practice	Additional Information
Use terms such as "healthy weight" instead of "normal weight."	To reduce the risk of stigmatizing students, notification should be consistent to all parents.
Use terms such as "at risk for being overweight" or "might be overweight."	To avoid giving the impression that a diagnosis has been made, the letters to parents about students who need further evaluation—those classified as underweight, overweight, or obese—should avoid definitive statements about the student's weight category. All communication should strongly encourage parents to consult a health care provider to determine if the student's weight presents a health risk. ^{2, 3}
Avoid using the term "obese."	
Identify the student's height, weight, and BMI-for-age percentile, and include a table defining BMI for-age percentile categories with images.	
Communicate that the student's weight was found to be low/healthy/high for his/her height and age.	

Sharing BMI Results with Parent/Guardian

The best practices outlined below were shared by school districts that successfully share BMI results with the parent/guardian of all students screened for BMI, regardless of the student's BMI results.

Best Practice	Additional Information
Auto generate a results letter based on screening result with recommendations for follow up based on the screening result.	BMI results should not be sent as standalone communication. Provide each student with a health report card which includes the results of all screening services provided, along with basic educational information on what the results mean and what the parents or guardians should do with the information. ¹ BMI screening programs are not intended to diagnose weight status. School districts should recommend the student be seen by their health care provider and share the BMI results with the provider. A sample model for the health report card ⁴ to notify parents or guardians of the child's BMI results can be viewed here .
Send screening results through mail addressed to the parent/guardian.	Sending results through the mail instead of directly providing to the student ensures student confidentiality and privacy (ex. lost or misplaced forms). Mailing the results increases the likelihood that the parent/guardian will receive the results.
Avoid giving screening results directly to students.	
Provide education via telephone to parent/guardian by Coordinated School Health.	Educate parent/guardian on what BMI means and importance of screening and refer to the student's health care provider, as needed.

² [Tennessee Health Screening Guidelines, 2022](#)

³ Thompson HR, Linchey JK, Madsen KA. Critical Elements of a School Report to Parents on Body Mass Index. Prev Chronic Dis 2015;12:150165. DOI: <http://dx.doi.org/10.5888/pcd12.150165>

⁴ Tenn. Code Annot. 49-6-1402

Health/school nurse regarding importance of BMI screening and follow up, if needed.	
Schedule office hours.	Schedule available office hours for parent/guardian to speak with Coordinated School Health/school nurse to discuss screening results.
Share results online via the student information system (SIS).	Sharing results via the SIS helps to ensure student confidentiality and privacy but does not guarantee the parent/guardian will review results.

School Based Interventions and Strategies

Schools where aggregate data suggests that high rates of overweight children may be a problem are encouraged to expand existing or implement new school-based nutrition and physical activity programs designed to reduce those rates. The effectiveness of these results could be determined by completing a BMI-for-age on the school's students whose parents or guardians have not requested exclusion from the testing at the end of the school year.⁵

Resource	Additional Information	Link
Community Preventive Services Task Force (CPSTF) - The Community Guide. Evidence-Based Interventions for Your Community	CPSTF released findings on what works in public health to prevent and control obesity. The findings can be used to identify intervention strategies that could be used in your school district.	Click here to view.
One Pager: Behavioral Interventions to Reduce Screen Time Among Children	This one-page handout summarizes the CPSTF recommendation and systematic review evidence for behavioral interventions to reduce recreational sedentary screen time among children aged 13 years and younger.	Click here to view.
One Pager: Digital Health Interventions for Adolescents with Overweight or Obesity	This one-page handout summarizes the CPSTF recommendation for digital health interventions to assist adolescents with overweight or obesity with weight management.	Click here to view.
One Pager: Interventions to Increase Availability of Healthier Foods and Beverages in Schools	This handout summarizes the CPSTF findings and systematic review evidence for four interventions aimed at increasing the availability of healthier foods and beverages in schools.	Click here to view.

⁵ Tenn. Code Annot. 49-6-1404

One Pager: Interventions to Increase Health Eating and Physical Activity in Schools	<p>This one-page handout summarizes the CPSTF finding of insufficient evidence for three school-based intervention approaches that combine dietary interventions with physical activity interventions. This does NOT mean the intervention approaches are ineffective; it means there is not enough evidence available to understand which of these approaches work.</p>	Click here to view.
One Pager: Meal or Fruit and Vegetable Snack Interventions Combined with Physical Activity Interventions in Schools	<p>This one-page handout summarizes the CPSTF recommendation and systematic review evidence for school-based interventions that combine meal or fruit and vegetable snack interventions with physical activity interventions to improve health among elementary school students through grade six.</p>	Click here to view.

Visit the [Coordinated School Health webpage, Reports and Data](#) to view additional information on BMI in Tennessee.