

# **BMI Screening Program**



# **Height and Weight Measurement Training Manual**

Updated August 2018



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## Height and Weight Measurement Procedures

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## **General Information & Requirements**

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### **Introduction**

To improve the health of Arkansas children and combat the growing epidemic of child and adolescent obesity, in 2003 the Arkansas General Assembly and Gov. Mike Huckabee passed Act 1220. This multi-pronged initiative was the first of its kind in the nation. One component of Act 1220 mandates annually measuring the height and weight of each public school student to determine their body mass index (BMI) for age percentile. Act 201 of 2007 modified the requirements so that only students in grades K, 2, 4, 6, 8, and 10 are required to be assessed every school year. Schools have the option, however, of measuring all students. Height, weight, age, and gender are used to calculate BMI percentile for age. A BMI is a screening test only; it indicates if a person is underweight, a healthy weight, overweight, or obese.

To help the state and schools provide parents with important knowledge regarding the health of their children, the Arkansas Center for Health Improvement (ACHI) became the administrator responsible for developing and implementing standardized statewide BMI assessments and reporting in academic year 2003–2004. ACHI has continued assisting schools for the past 15 years starting with the 2003-2004 academic year. ACHI is committed to improving the assessment process, making it easier for schools to participate in this important statewide initiative to improve the health of our children.

### **BMI Measurement Training and Reporting**

Act 201 of 2007 requires Arkansas Department of Health Community Health Nurse Specialists (CHNS) to work with schools to assure that BMI for age assessment protocols are followed by school employees or their designees who conduct the BMI assessments and other student health screenings. Training sessions for school personnel are provided annually.

Act 1220 and Act 201 also require that BMI results be reported each year to parents or guardians, along with an explanation of what the BMI means, the health risks associated with obesity, and the effects of nutrition and physical activity. If a parent refuses to have their child's BMI assessed and reported, they must provide a written refusal to the school.

Questions and technical assistance requests should be directed to the Community Health Nurse Specialists (CHNS) and Community Health Promotion Specialists (CHPS) located at the Arkansas Education Service Cooperatives, the State School Nurse Consultant and Act 1220 Coordinator at the Arkansas Department of Education (ADE) 501-683-3604, the Arkansas Department of Health (ADH) Act 1220 Coordinator 501-280-4889, or ACHI 501-526-2244.

## Height and Weight Measurement Procedures

### LEARNING OBJECTIVES

The goal of this protocol for Body Mass Index (BMI) assessment for age is to certify participants in the measurement techniques described in this manual.

At the completion of this training the participant will be able to:

1. Set up measurement stations with all of the appropriate equipment
2. Check the accuracy of the scales
3. Prepare students for measurement
4. Measure height and weight following proper procedure
5. Perform the steps of the weight measurement correctly
6. Perform the steps of the height measurement correctly
7. Apply the one-inch rule for height
8. Prepare students' data for entry into the electronic BMI data entry system ([www.achi.net](http://www.achi.net))
9. Maintain students' privacy and confidentiality
10. Make available a confidential student health report to parents/guardians

## Height and Weight Measurement Procedures

### DEFINITIONS

BMI – Body Mass Index

BMI =	$\frac{(\text{Weight in Pounds})}{[(\text{Height in Inches} \times \text{Height in Inches})]}$	x 703
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BMI =	$\frac{(\text{Weight in Kilograms})}{[(\text{Height in Meters} \times \text{Height in Meters})]}$	
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**BMI for age assessment protocols** – A detailed plan designed to describe appropriate procedure for assessment.

**BMI for age assessment** – Calculating the height and weight as in the definition for BMI and applying the CDC growth charts for age and gender.

**BMI Percentile for Age** – An indicator to assess the size and growth patterns of individual children based on the Centers for Disease Control and Prevention’s (CDC) BMI-for-age growth charts for boys and girls.

**Carpenter’s square** – An instrument for ensuring a level reading of height.

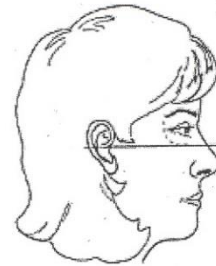
**Certificate of completion** – Document provided upon completion of BMI assessment training protocol.

**Confidential** – Information marked or intended for a specific person or persons.

**Digital Scale** – An instrument for measuring weight.

**External Auditory Canal** – Passageway that leads from the outside of the head to the tympanic membrane, or eardrum membrane, of each ear.

**Frankfort Horizontal Plan** – Imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye.



**Height** – A standing measurement in inches or meters.

**Medial Border** – Relating to the middle or center.

**Orbital Margin** – The top of the lower bone of the eye socket.

**Private** – Not open or in public.

**Recorder** – Person who writes down student heights and weights or enters measurements into database.

## Height and Weight Measurement Procedures

### DEFINITIONS (continued)

**Scapulae** – Two large, flat, triangular bones forming the back part of the shoulder; also called shoulder blade.

**Stadiometer** – Instrument for measuring standing height.

**Student Health Report** – A written notice to parents with student's health screening information.

**Written Refusal** – A document addressed to the school district requesting that a child not be included in assessing BMI, provided by the parent or guardian.

**Weight** – A measurement in pounds or kilograms.

## Height and Weight Measurement Procedures

### RECOMMENDED EQUIPMENT

The equipment listed below is what is recommended for the accurate measurement of height and weight in Arkansas public and charter schools. The recommended equipment was tested in pilot schools across Arkansas and was shown to be accurate and reliable. The equipment recommended is listed below:

#### 1. Stadiometers and Scales

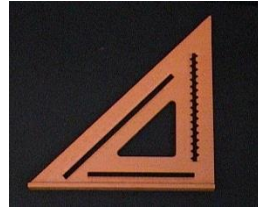
Height will be measured using a stadiometer. Stadiometers can be either portable or permanently affixed to a wall. In general, it is recommended that portable stadiometers are used, so that schools can share equipment, and to avoid problems relating to proper installation of wall-mounted models. It is also recommended that digital scales be used over other models due to better precision of the measurements, and ease of reading the digital read-out.

#### Recommended Stadiometers and Scales:\*

##### Stadiometers

#### a. 84" Yard Stick on Wood Board

Originally the Department of Corrections mounted an 84" metal yard stick onto an 86" wood board. To build your own stadiometer to the Department of Education's specifications see Appendix A. Taping the wood board to the wall with some type of strong adhesive tape (i.e. duct tape) is suggested for stability of the stadiometer. A carpenter's triangle is used for the headpiece. This arrangement allows that unit to be portable, as recommended. As a result of testing numerous plastic stadiometers in a similar price range, it was found that most of those models were not durable, especially the thin plastic headpieces. Therefore, in order to keep costs in a reasonable range, the board-mounted metal yard stick with a hard plastic carpenter's triangle headpiece was tested and found to work quite well.



#### b. Shorr Board

The Shorr Measuring Board Stadiometer is top of the line, Gold Standard equipment commonly used in research settings. It offers accurate measurement due to the wide wooden head piece used for measuring height, thereby reducing the chances for measurement error commonly caused when a narrower head piece is used. The Shorr Board is sturdy and durable as it is handcrafted out of solid wood. It is also collapsible which allows it to be stowed away or transported easily.





## Height and Weight Measurement Procedures

### RECOMMENDED EQUIPMENT (continued)

#### Scales

a. Tanita HD-314 Scale

The Tanita HD-314 scale is a portable scale originally designed for home use but capable of withstanding heavy-duty use. It measures up to 330lbs, is lightweight for good portability, and has a digital read-out.



b. Tanita HD-351 Scale

The Tanita HD-351 scale is a portable scale originally designed for home use but capable of withstanding heavy-duty use. It measures up to 440lbs, is lightweight for good portability, and has a digital read-out. If using this scale it is recommended that a piece of colored taped be placed over the previous weight readout for confidentiality purposes.



2. Step Stool

It is recommended that each school purchase a two-height step stool for use with the height measurements. The accurate measurement of height requires that the measurer is able to read the measurement line at eye-level. Additionally, some measurers will not be tall enough to do this without standing on a step stool, even for elementary school children.

3. Batteries

Many scales require batteries. Usually AA batteries or lithium batteries are required, but you will need to check the type and number of batteries required for the scales used at your school.

4. Standard Weights for Checking Accuracy

At the beginning of each measurement day at the school, accuracy of the scales will be required. A known standardized weight must be placed on each scale. This weight (reading on the scale) should be logged on the calibration log with the corresponding date and time noted. If the recorded weight is more than half a pound higher or lower than the standard weight, the measurement should be repeated and re-recorded. If the recorded weight is more than half a pound different from the calibration weight, then you should change the batteries. If that does not correct the problem, then this scale should not be used for assessments.

**NOTE: If you are using scales that measure in metric units, then the weight on the scale should be no more than 0.2 kg higher or lower than the standard weight.**

5. Data Collection

There are two methods for data collection. They are:

- Direct data entry via web (recommended)
- Data entry on paper forms to be entered on the website at a later time.

## Height and Weight Measurement Procedures

### RECOMMENDED EQUIPMENT (continued)

6. Name Tags

The use of nametags for the children who are being measured is recommended. This helps to ensure that the correct data collection is completed for the corresponding child. It is also recommended that nametags are used for all staff involved in the collection of these data. This will identify the measurement team to the children and to the school staff.

7. Adhesive Tape

Duct tape, or similar adhesive (such as blue painter's tape) is recommended, to stabilize the wood-board mounted stadiometers to the wall if the 84" yard stick or similar stadiometer is used.

8. Office Supplies

The following general office supplies are recommended when performing the height and weight measurements in schools:

Baskets for children's personal items  
Black pens (if not doing direct data entry)  
Extra, blank nametags  
Paper clips

- \* *Contact your Community Health Nurse Specialist or Community Health Promotion Specialist at your local education cooperative for purchasing information or other equipment options.*

## Height and Weight Measurement Procedures

### STANDARDIZED MEASUREMENT PROCEDURE

It is recommended that multiple stations be used, each consisting of one complete set of data collection equipment: 1 stadiometer (stabilized against the wall with duct tape if necessary), 1 scale (tested for accuracy), 1 step stool, data collection forms or computer, basket (for the child's personal items) and general office supplies. In order for an individual school to utilize multiple stations, several schools will need to share equipment and rotate that equipment from one school to the next. For the most accurate measurements, it is highly recommended that assessments be conducted on hard surface floors (i.e., gym floor, tile floors). Avoid floors that are carpeted.

#### 1. Preparation of the Child

The child should be asked to remove as much outerwear as possible. Regardless of the clothing worn, the child should be asked to remove his/her shoes and will be measured either barefoot or while wearing socks.

Additionally, the child will be asked to empty his/her pockets and remove all jewelry or other objects. The child will be asked to remove eyeglasses, hair barrettes, and ties or rubber bands, if possible, so that accurate height and weight measurements can be obtained. A small box or basket should be provided at each measurement station for the child to place their personal items in until their measurements are complete.

#### 2. Measurement Order

One measurement of weight and two measurements of height should be taken and entered for each child. Because the measurement of height requires greater skill to perform correctly, two measurements are required in order to reduce errors and therefore obtain a more accurate calculation of BMI. If the difference between the two height measurements is greater than one inch, then a second set of two height measurements should be taken to try to obtain values within one inch of each other. **NOTE: If metric measures are used, the difference between the two height measurements should be no greater than 2 centimeters.**

The measurements of weight and height should be measured in rotational order, as follows: first height, weight, and second height. If the difference between the two height measurements is greater than one inch (per above), then the child must be re-measured. If after two trials a pair of height measurements within the one-inch criteria cannot be achieved, then the child's assessment is considered "Unable to be Assessed." When entering this child's data into the web-entry system, click on "Unable to Assess." Then click, "Could not get two measurements in range after two repeats," and provide an explanation on the line(s) provided.

It is recommended that a team of two people perform the measurements together at each measurement station. One person should be designated as the measurer and the other person should be designated as the recorder. The measurer performs the weight and height measurements on the child, and the recorder either records the data on the assessment form or directly enters the child's information into the web-entry system.

## Height and Weight Measurement Procedures

### STANDARDIZED MEASUREMENT PROCEDURE (continued)

#### 3. Role of the Recorder

The measurer will take the first height measurement, and will call out the number to the recorder. The recorder will call the number back to the measurer to confirm the correct reading. Then the recorder will record that number on the data collection form or directly into the web-entry system in the space indicated for “Height 1.”

Next, the measurer will position the child for the weight measurement, and will verbally indicate to the recorder that the child is ready. The recorder will then obtain the number for the weight measurement from the read-out on the scale, and record that number on the data collection form or directly into the web-entry system in the space indicated for “Weight.”

The measurer will then re-measure the child’s height and the recorder will record the second height number in the space indicated for “Height 2” using the same steps as used for the first height measurement.

**NOTE: The reading for the weight measurement is NOT called out by either the measurer or the recorder in order to ensure that the child (and other staff or children who may be standing nearby) is not made aware of his/her weight measurement.**

Since the height measurement is subject to greater error, and is not generally considered to be sensitive data, those measurement readings are called out by the measurer and the recorder to increase the overall accuracy of height measurements.

The recorder is responsible for checking the two height measurements to determine if there is more than a one-inch difference between the two heights. If directly entering into the web-entry system, a message note will appear notifying the recorder if there is a more than a one-inch difference between the two measurements. If there is more than a one-inch difference, then the child must be re-measured as discussed in the “Standardized Measurement Order” section. If a re-measurement needs to be made, the recorder should place a single line through the entries for the first set of measurements, and initial the line if using the assessment form. Then the second set of two measurements is recorded on the lines provided. If using the web-entry system, simply replace the “Height 1” and “Height 2” in the indicated fields. Whether or not the one-inch criteria are achieved with the second set of two measurements, no additional height measurements will be taken.

**Remember, if after two trials a pair of height measurements within the one-inch (>2cm) criteria cannot be achieved, then mark the “Unable to Assess” box and the “Could not get two measurements in range after two repeats” box.**

## Height and Weight Measurement Procedures

### STANDARDIZED MEASUREMENT PROCEDURE (continued)

#### 4. Weight Measurement

For the measurement of weight, the child will be asked to step up backwards onto the scale and stand still over the center of the scale with body weight evenly distributed between both feet. **In order to ensure confidentiality and to prevent the child from seeing his/her weight, it is required that the child step on the scale backward facing away from the readout.** The child's arms should be hanging freely by the sides of the body, with palms facing the thighs. The child should hold his/her head up, and face forward.

Weight is recorded to the nearest 0.2 pound using the recommended scale with a digital readout. Depending on the type of scale used, record to the nearest fraction of a pound, whole pound, pounds and ounces, kilograms, or grams.

#### 5. Height Measurement

For the measurement of standing height, the child will be asked to stand with his/her back against the board. The back, scapulae, and buttocks are in contact with the vertical board if possible, or whichever part of the body touches the board first. The weight of the child should be evenly distributed on both feet. The child will be asked to place the legs together, bringing the ankles or knees together, whichever comes together first (often they will come together simultaneously). If the child has knock-knees, the feet are separated so that the medial borders of the knees are in contact, but not overlapping.

The child is instructed to stand erect (stand up straight and look straight ahead). The child's position should be verified from both the FRONT and from the LEFT side of the body. Next, the child's head is positioned in the Frankfort Horizontal Plane. In this position, an imaginary line can be drawn from the bottom of the eye socket (orbital margin) to the external opening of the ear (external auditory canal).

The child will be asked to inhale deeply and hold his/her breath WHILE MAINTAINING the head and body in the same position. Sometimes a child will either lift his/her head or pull up onto the toes when taking the deep breath. If this happens, the measurer will need to re-position the body and head before taking the measurement.

The moveable headpiece is brought onto the upper most (superior) point on the head with sufficient pressure to compress the hair. After the measurement is obtained the child should be told they no longer need to hold his/her breath. The measurement is recorded to the nearest 1/8<sup>th</sup> of an inch, (or nearest 0.1cm, nearest 1/16 inch, or nearest mm, depending on the stadiometer used).

## Height and Weight Measurement Procedures

### RECORDING THE DATA

Whether using the paper assessment forms or inputting the data directly into the web-entry system, the information needed is the same. There are three forms needed to be maintained by the assessors: (1) The ACHI Scale Accuracy Log (formerly called the ACHI Scale Calibration Log), (2) The ACHI Measurement Station Information Form, and (3) The ACHI Height and Weight Data Collection Form (or direct web-entry). Detailed data entry procedures are found in the ACHI Data Entry Training Manual.

#### 1. ACHI Scale Accuracy Log

This form is required to verify the accuracy of each scale to be used for measurements on the day of the scheduled measurement at each school. The scales should be placed in the exact location where measurements will take place and then verified in that location. Once verified, **DO NOT MOVE** the scales.

On the lines provided at the top of the scale accuracy log, fill in the name of the school, school district, and county. Fill in the date of the verification and the initials of the person performing the verification.

In the third column, fill in the scale number and/or model name/number of the scale. In the fourth column, fill in the station number, if more than one station will be used at a school on the same day.

In the last three columns, fill in the weight readings obtained from the verification weights. Three known weights of increasing heaviness are used; however, the use of one known weight is sufficient if time and/or cost are an issue. To minimize the misreporting of a child's BMI due to faulty equipment, **verification with at least one known weight is extremely important.**

For each known weight used, the verification steps are as follows:

- a. Turn the scale on to "zero" the scale,
- b. Place a known weight in the center of the scale. If using more than one known weight, place the smallest one on the scale first.
- c. Record the scale reading in the appropriate column (i.e., if using a 5 pound known weight, record the scale readout in the 5 pound column) for the known weight used. If using more than one weight, repeat the steps until all of the known weights have been used.

If the recorded scale reading is more than half a pound (English measure) higher or lower than the known weight, the measurement should be repeated and re-recorded (on the next line of the form). If the scale reading remains more than half a pound different from the known weight, then that scale should not be used for measurements that day. **NOTE: If scales are used that measure in metric units, then the verification should be no more than 0.2 kg higher or lower than the known weight.**

## Height and Weight Measurement Procedures

### RECORDING THE DATA (continued)

#### 2. Measurement Station Information Form

The Measurement Station Information Form was designed to document what stadiometers and scales are used at each station at each school, especially when more than one model is used at the same school. This is important because the type/model of equipment used determines the appropriate unit of measurement (e.g., centimeters or 1/8<sup>th</sup> inch; fractions of pounds or whole pounds only, etc.).

After ensuring that the stations have been verified for accuracy, fill out the station information section in the web entry system. A station form is required for each station used. These details must be entered before any student data is entered. At the top of the form, enter the station number as well as scale and stadiometer details. Click "Save" to update the information. If any required information is not correct, the system will not save the information but rather post a "go back" message for the form to be corrected.

The completion of this form will assist personnel in interpreting the data and, therefore, calculating accurate BMI values when units of measurement may be in question. This process should also assist school personnel in determining the correct unit of measurement for the equipment they are using, thereby increasing their comfort level with the measurement process.

#### 3. Height and Weight Data Entry

Two methods of recording height and weight are acceptable. The same information is needed regardless of the method chosen.

The two methods are:

1. Record height and weight on the ACHI Height and Weight Data Collection form and then enter the information into the web-entry system.
2. Directly enter the height and weight into the web-entry system at the time of the assessment.

The following student information is needed to calculate the BMI for age assessment and to create the student health report sent home to parent/guardian:

- Student's full name
- Social Security Number (SSN) or School ID number
- Guardian name
- Student address
- Student grade
- Student gender
- Assessment date
- Date of birth

## Height and Weight Measurement Procedures

### RECORDING THE DATA (continued)

If a student has been previously assessed for BMI, then the student information may already be in the web-entry system. If the information is already in the system, check the information for accuracy. This will help eliminate errors in the generation of the student health report.

Finally, the child's weight and both height measurements should be entered into the web-entry system where indicated. If the child is unable to be assessed, click the box for the appropriate reason, including:

- Absent
- Child Refused
- Parent Refused
- Pregnancy
- Physically Disabled
- Wrong School
- No 2 Measurements within 1 Inch
- Weight Exceeded Scale
- Other

**NOTE: For full compliance all "Unable to be Assessed" information must be entered into the web-entry system.**

One of the changes resulting from Act 201 of 2007, allows parents the option to refuse weight and height measurements. If the parent wishes for their child not to participate, they must provide a written refusal to the school.



## Height and Weight Measurement Procedures

### SUMMARY OF MEASUREMENT PROCEDURE

- Set up measurement stations with the appropriate equipment.
  - Computer with internet access (if available)
  - Digital scale
  - Stadiometer, stabilized against the wall
  - Step stool
  - Basket and general office supplies
- Verify accuracy of the scales.
- Prepare the child for measurements.
  - Name tag
  - Remove outer wear, shoes, glasses, jewelry
  - Empty pockets
- Measure first height, weight, and second height.
  - Measurer positions the child and performs the measurements in rotational order
  - Recorder verifies data entry (either paper record or web entry), then checks height measurements for one-inch (2 cm) criteria
- Apply the one-inch (2 cm) criteria for height; re-measure height if necessary.

## Height and Weight Measurement Procedures

### SUMMARY OF WEIGHT MEASUREMENT

- Turn on the scale to “zero” the scale.
- Place standard weight on the scale to ensure accuracy of the scale.
- If the readout is more than one-half pound off the standard weight, change the batteries. Then place the standard weight on the scale again. If it is still off by more than a half a pound, do not use this scale.
- If scale is accurate, begin assessments.
- Ask the child to remove extra layers of clothing, jewelry, and any items in his/her pockets.
- Ask the child to step on the scale backwards (for confidentiality).
- Ensure that the body weight is evenly distributed between both feet.
- Ensure that arms hang freely by the sides of the body, palms toward thighs.
- Ensure that head is up and facing straight ahead.
- Record weight to the nearest 0.2 pounds (or appropriate unit for the scale).

## Height and Weight Measurement Procedures

### SUMMARY OF HEIGHT MEASUREMENT

- Child stands with back against the board (or whatever part of the body touches the board first; may be more than one body part).
- Body weight is evenly distributed on both feet.
- Arms hang freely by the sides of the body, palms facing the thighs.
- Legs are placed together, bringing knees or ankles together.
- Child stands erect; head is up and facing straight ahead.
- Verify body position front and left.
- Position head in Frankfort Horizontal Plane.
- Child inhales deeply holding his/her breath WITHOUT moving head or body.
- Bring headpiece down onto the upper most point on the head; compress the hair.
- Child is told to let breath out.
- Height is recorded to the nearest 1/8<sup>th</sup> inch (or appropriate unit for the stadiometer).
- Repeat after obtaining weight.

## Height and Weight Measurement Procedures

### RESOURCES

#### **Arkansas Specific Websites**

Arkansas 21<sup>st</sup> Century Network

<https://medicine.yale.edu/childstudy/zipler/21c/projects/arkansas/>

Arkansas Center for Health Improvement

<http://www.achi.net>

Arkansas Child Health Advisory Committee

<https://www.healthy.arkansas.gov/programs-services/topics/child-health-advisory-committee>

Arkansas Coordinated School Health

<http://www.arkansased.gov/divisions/learning-services/school-health-services/arkansas-coordinated-school-health>

Arkansas Department of Education – Child Nutrition Unit

<http://www.arkansased.gov/divisions/child-nutrition-unit>

Arkansas Department of Education – School Health Services

<http://www.arkansased.gov/divisions/learning-services/school-health-services/>

Arkansas Department of Health

<https://www.healthy.arkansas.gov/>

Arkansas Economic Development Institute – Census State Data Center

<https://ualr.edu/aedi/census-state-data-center/>

Arkansas Government Act 1220 of 2003

<http://www.arkleg.state.ar.us/assembly/2003/R/Acts/Act1220.pdf>

Arkansas Government Act 29 of 2003

<http://www.arkleg.state.ar.us/assembly/2003/S2/Acts/Act29.pdf>

Arkansas Government Act 201 of 2007

<http://www.arkleg.state.ar.us/assembly/2007/R/Acts/Act201.pdf>

Arkansas Governor's Council on Fitness

<http://www.agcof.com/>

Healthy Active Arkansas

<https://healthyactive.org/>

## Height and Weight Measurement Procedures

### RESOURCES (continued)

#### **National Websites**

##### ***General***

Action for Healthy Kids

<http://www.actionforhealthykids.org/>

Alliance for a Healthier Generation

<http://healthiergeneration.org/>

National Association of School Nurses

<http://www.nasn.org>

National Heart, Lung, and Blood Institute

Overweight and Obesity <https://www.nhlbi.nih.gov/health-topics/overweight-and-obesity>

Cardiovascular Health [https://www.nhlbi.nih.gov/files/docs/peds\\_guidelines\\_sum.pdf](https://www.nhlbi.nih.gov/files/docs/peds_guidelines_sum.pdf)

Robert Wood Johnson Foundation

<https://www.rwjf.org/en/our-focus-areas/topics/childhood-obesity.html>

The Obesity Society

<https://www.obesity.org/>

The Weight-Control Information Network, National Institutes of Health (NIH)

<https://www.niddk.nih.gov/health-information/communication-programs/win>

##### ***Assessment***

Annie E. Casey Foundation- Kids Count

<http://www.aecf.org/work/kids-count/>

National Center for Chronic Diseases Prevention Health Promotion Nutrition, Physical Activity and Obesity

<https://www.cdc.gov/nccdphp/dnpao/index.html>

US Census – American FactFinder

<https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

##### ***Nutrition***

Academy of Nutrition and Dietetics

<https://www.eatright.org/for-kids>

BMI Calculator

<https://www.cdc.gov/healthyweight/bmi/calculator.html>

My Plate – USDA

<https://www.choosemyplate.gov/>

## Height and Weight Measurement Procedures

### RESOURCES (continued)

#### ***Physical Activity***

America Walks

<http://americawalks.org/>

Healthy Places by Design

<https://healthyplacesbydesign.org/>

Human Kinetics

<http://www.humankinetics.com/home>

Let's Move!

<https://letsmove.obamawhitehouse.archives.gov/>

National Center for Bicycling and Walking

<http://www.bikewalk.org/>

Physical Activity Guidelines for Americans

<https://health.gov/paguidelines/guidelines/default.aspx>

Safe Routes to School

<https://www.saferoutespartnership.org/> and

<http://www.walkbiketoschool.org/beyond/safe-routes-to-school/>

SHAPE America

<https://www.shapeamerica.org/>

#### ***Tools for Schools***

Arkansas BMI Toolkit for School Nurses

<https://www.healthy.arkansas.gov/programs-services/topics/school-health>

Health Education Curriculum Analysis Tool – HECAT

<https://www.cdc.gov/healthyyouth/hecat/>

Physical Education Curriculum Analysis Tool – PECAT

<https://www.cdc.gov/healthyschools/pecat/index.htm>

School Health Index

<https://www.cdc.gov/healthyschools/shi/index.htm>

Smart Snacks Calculator

<https://foodplanner.healthiergeneration.org/calculator/>

USDA Team Nutrition

<https://www.fns.usda.gov/tn/team-nutrition>

## Height and Weight Measurement Procedures

### RESOURCES (continued)

Wellness School Assessment Tool – WellSAT  
<http://www.wellsat.org/>

#### ***Tools for Community***

CDC School Health Policies and Practices Study  
<https://www.cdc.gov/healthyouth/data/shpps/index.htm>

State of Obesity Reports  
<http://www.stateofobesity.org>

#### ***Tools for Kids and Parents***

Body and Mind  
<https://www.cdc.gov/bam/index.html>

Nemours Foundation: Kids Health  
<https://kidshealth.org/en/parents/nemours.html>

#### ***Tools for Parents and Providers***

2000 CDC Growth Charts  
[https://www.cdc.gov/growthcharts/cdc\\_charts.htm](https://www.cdc.gov/growthcharts/cdc_charts.htm)

American Academy of Pediatrics Policy Opportunities Tool  
<https://ihcw.aap.org/Pages/popot.aspx>

Be Our Voice – National Institute for Children’s Health Quality  
Advocacy Toolbox <https://www.nichq.org/resource/advocacy-toolbox>  
Advocacy Resource Guide <https://www.nichq.org/resource/advocacy-resource-guide>

Center for Science in the Public Interest  
<https://cspinet.org/>

Dietary Guidelines for Americans  
<https://health.gov/dietaryguidelines/2015/>

Healthy People 2020 Toolkits  
<https://www.healthypeople.gov/2020/tools-resources>