

A photograph of a bright red apple with a small green stem, resting on a stack of three books. The books have blue and white covers. The background is a plain, light-colored surface.

Understanding Your Child's Body Mass Index (BMI)

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*Developing healthy eating habits
and active lifestyles for
children.*

Provided by the Shape Your Future Team

Why is childhood obesity considered a health issue?

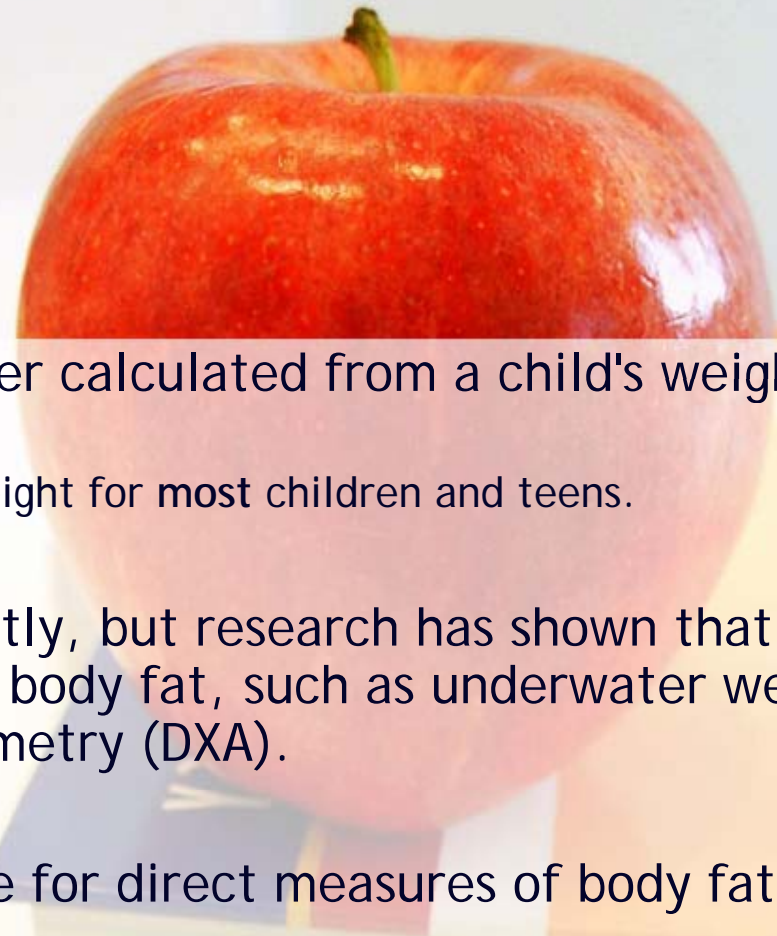
Doctors and scientists are concerned about the rise of obesity in children and youth because obesity may lead to the following health problems:

- Heart disease caused by:
 - High cholesterol and/or high blood pressure
 - Type 2 diabetes
 - Asthma
 - Sleep apnea
 - Social discrimination
- Immediate health consequences
- Risk for weight-related health problems in adulthood



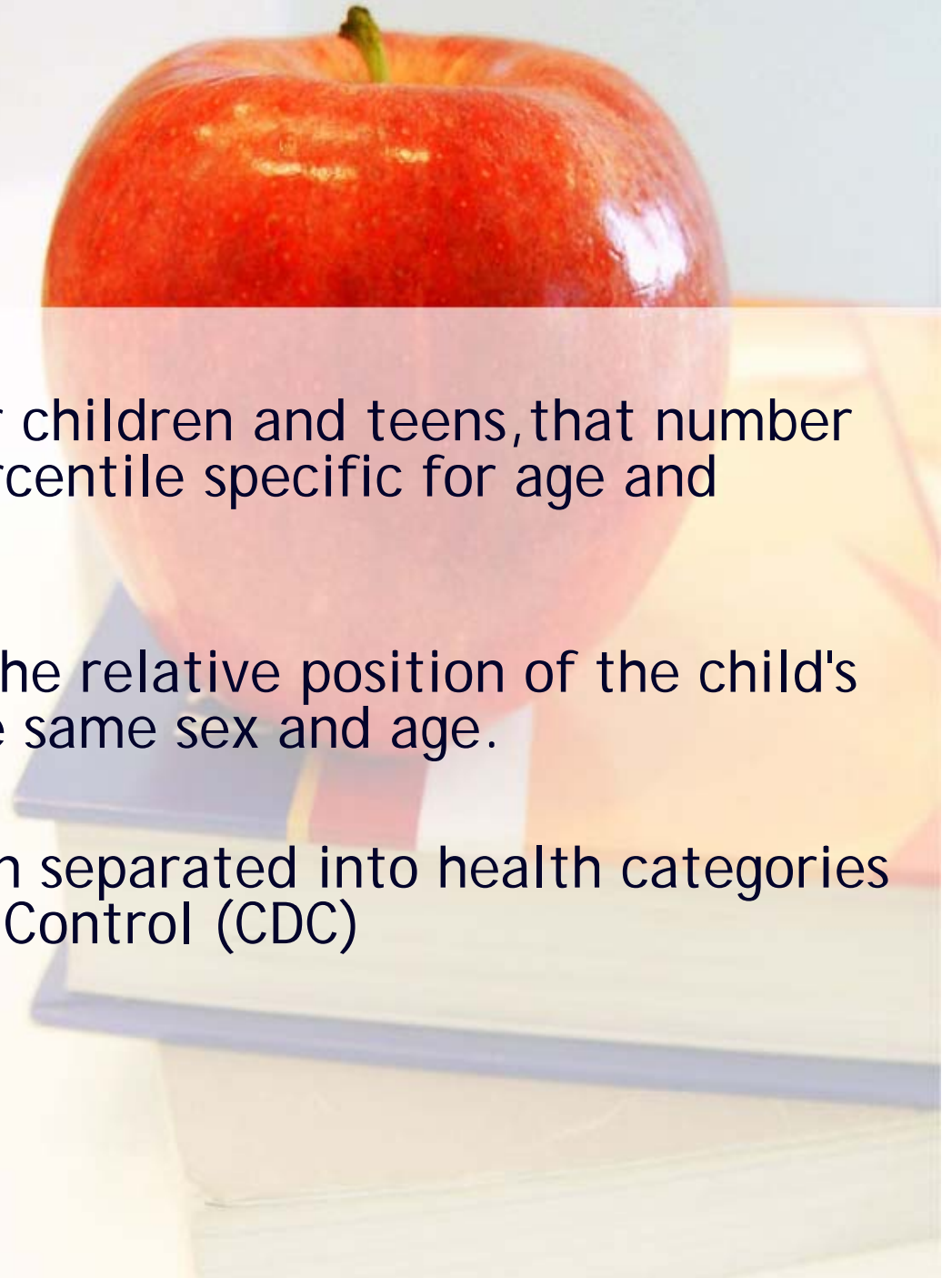
What is BMI?

- Body Mass Index (BMI) is a number calculated from a child's weight and height.
 - reliable indicator of excess body weight for most children and teens.
- Does not measure body fat directly, but research has shown that BMI correlates to direct measures of body fat, such as underwater weighing and dual energy x-ray absorptiometry (DXA).
- Can be considered an alternative for direct measures of body fat.
- It is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems.
- For children and teens, BMI is age- and sex-specific and is often referred to as BMI-for-age.



What is a BMI percentile?

- After BMI is calculated for children and teens, that number is then changed into a percentile specific for age and gender.
- The percentile indicates the relative position of the child's BMI among children of the same sex and age.
- These percentiles are then separated into health categories by the Center for Disease Control (CDC)
 - Underweight
 - Healthy weight
 - Overweight
 - Obese



A red apple is shown on a white kitchen scale. The apple is the central focus, with its stem and a small green leaf visible at the top. The scale's base is white, and the background is a soft, out-of-focus light blue and white. The text 'Weight Status Categories' is overlaid on a dark blue rectangular box in the upper left quadrant of the image.

Weight Status Categories

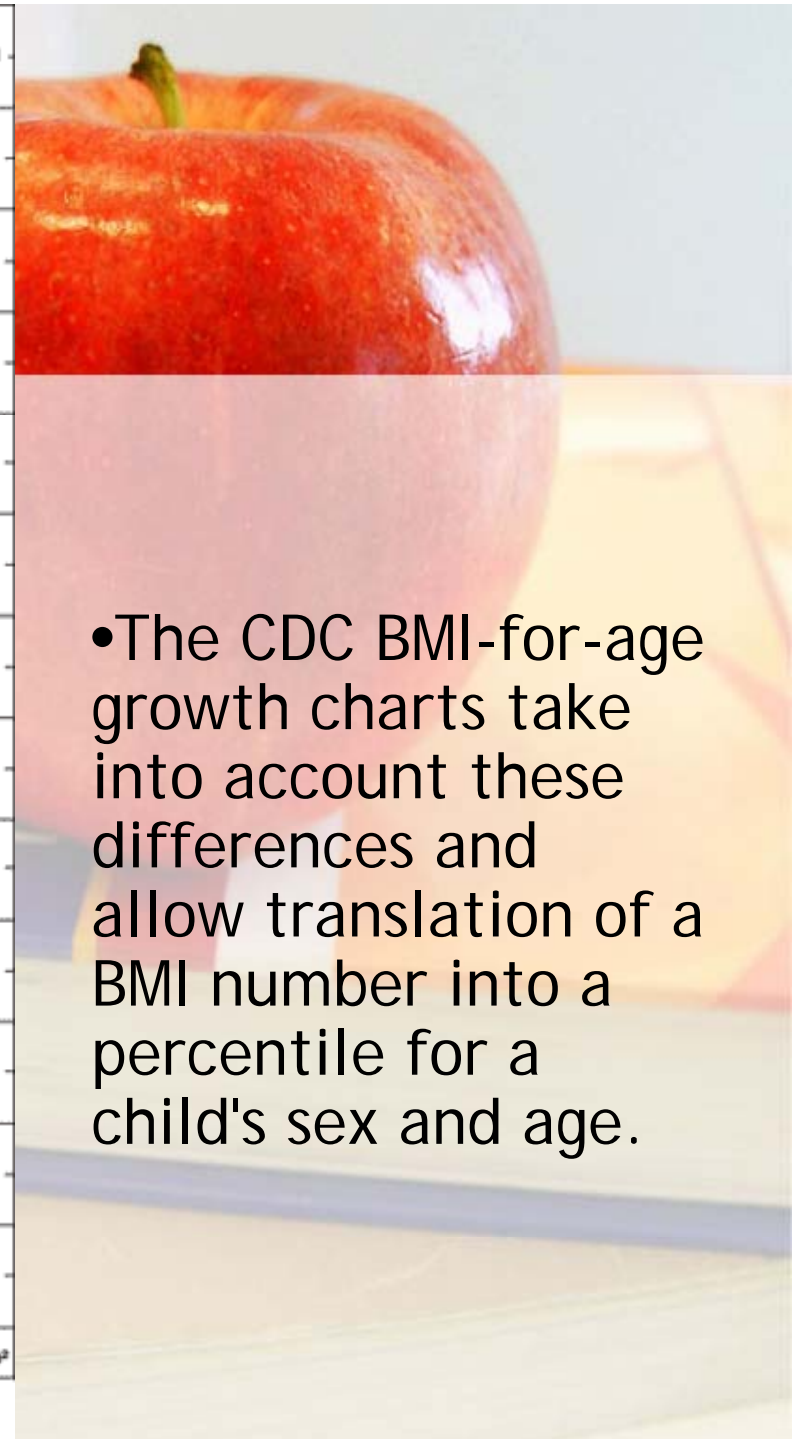
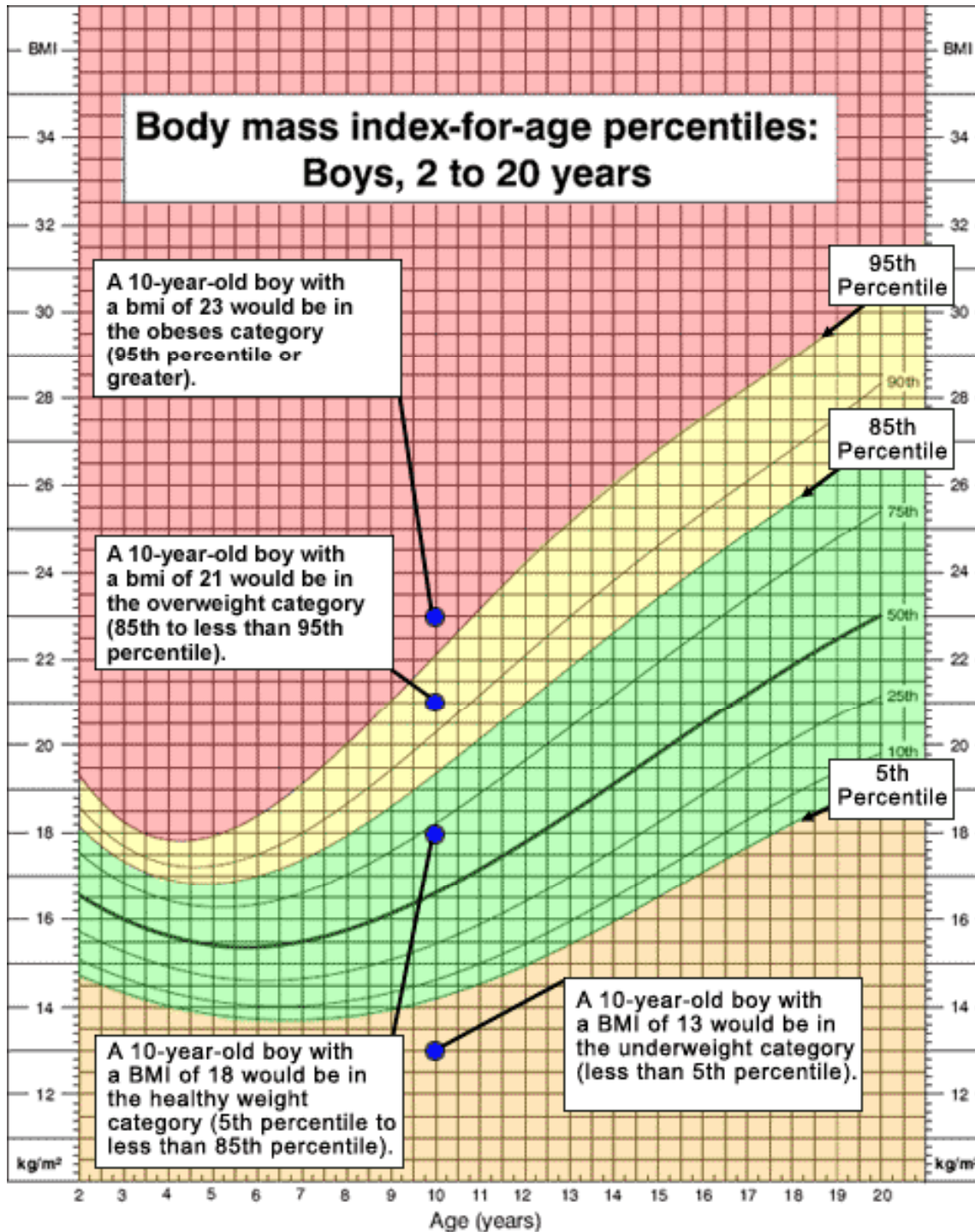
- Underweight = Less than the 5th%tile
- Healthy weight = 5th to less than the 85th%tile
- Overweight = 85th to less than the 95th%tile
- Obese = Equal to or greater than the 95th%tile

A red apple is shown on a scale, with the scale's base and a portion of the apple visible. The background is a light blue and white gradient.

Is BMI interpreted the same way for children and teens as it is for adults?

NO

- Although the BMI number is calculated the same way for children and adults, the criteria used to interpret the meaning of the BMI number for children and teens are different from those used for adults.
- For children and teens, BMI age- and sex-specific percentiles are used for two reasons:
 - The amount of body fat changes with age.
 - The amount of body fat differs between girls and boys.



- The CDC BMI-for-age growth charts take into account these differences and allow translation of a BMI number into a percentile for a child's sex and age.

A red apple with a green stem is positioned on top of a stack of three books. The books have blue, white, and yellow covers. The background is a soft, out-of-focus light blue and yellow.

Why can't healthy weight ranges be provided for children and teens?

- Healthy weight ranges cannot be provided for children and teens for the following reasons:
 - Healthy weight ranges change with each month of age for each sex.
 - Healthy weight ranges change as height increases.

A red apple is shown on a scale, with the scale's dial and weights visible in the background. The apple is the central focus of the image, and the text is overlaid on it.

How can I tell if my child is overweight or obese?

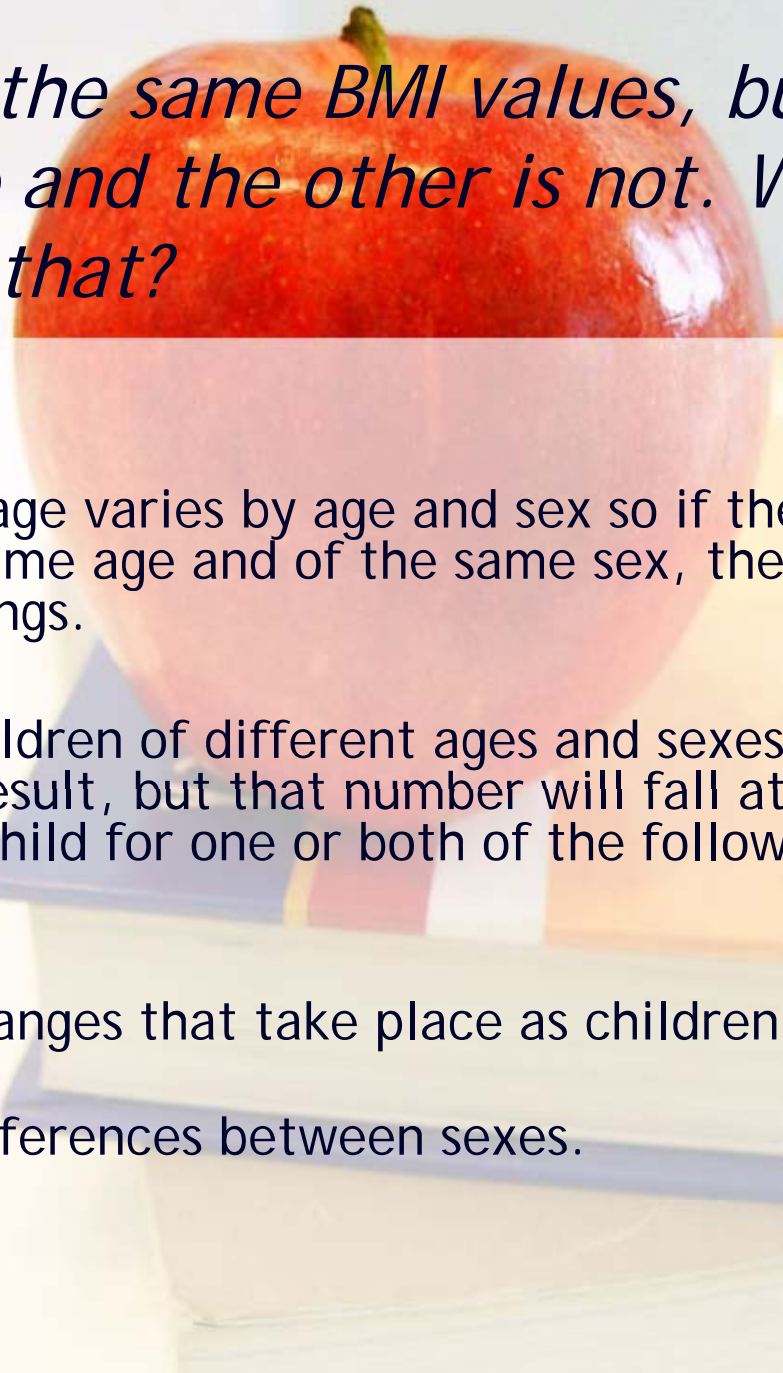
- CDC and the American Academy of Pediatrics (AAP) recommend the use of Body Mass Index (BMI) to screen for overweight and obesity in children and teens aged 2 through 19 years.
- Although BMI is used to screen for overweight and obesity in children and teens, **BMI is not a diagnostic tool.**
 - For example, a child who is relatively heavy may have a high BMI for his or her age.
 - To determine whether the child has excess fat, **further assessment would be needed.** It might include skinfold thickness measurements.
 - To determine a counseling strategy, assessments of diet, health, and physical activity are needed.

Can I determine if my child or teen is obese by using an adult BMI calculator?

No.

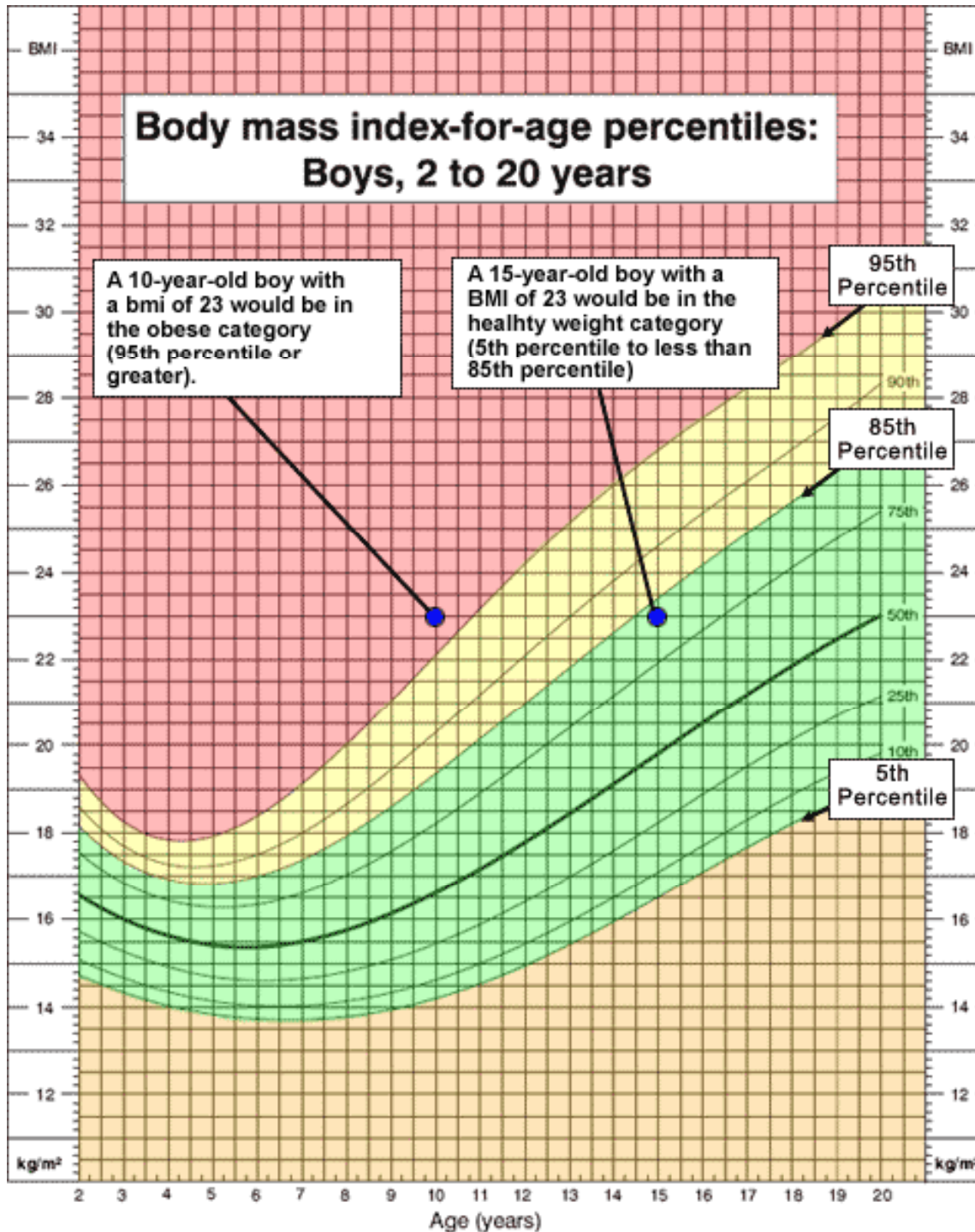
The adult calculator provides only the BMI number and not the BMI age- and sex-specific percentile that is used to interpret BMI and determine the weight category for children and teens.



A close-up photograph of a single, bright red apple with a small green stem, resting on a light-colored wooden surface. The apple is the central focus of the image, with a soft, out-of-focus background.

My two children have the same BMI values, but one is considered obese and the other is not. Why is that?

- The interpretation of BMI-for-age varies by age and sex so if the children are not exactly the same age and of the same sex, the BMI numbers have different meanings.
- Calculating BMI-for-age for children of different ages and sexes may yield the same numeric result, but that number will fall at a different percentile for each child for one or both of the following reasons:
 - The normal BMI-related changes that take place as children age and as growth occurs.
 - The normal BMI-related differences between sexes.



An example for a 10-year-old boy and a 15-year-old boy who both have a BMI-for-age of 23.

(Note that two children of different ages are plotted on the same growth chart to illustrate a point. Normally the measurement for only one child is plotted on a growth chart.)

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What can I do as a parent or guardian ?

- To help your child maintain a healthy weight, balance the calories your child consumes from foods and beverages with the calories your child uses through physical activity.
- **Remember** that the goal for overweight and obese children and teens is to **reduce the rate of weight gain** while allowing normal growth and development.
- They should **NOT** be placed on a weight reduction diet without the consultation of a health care provider.

Balancing Calories: Help Kids Develop Healthy Eating Habits

- ❑ Provide plenty of vegetables, fruits, and whole-grain products.
- ❑ Include low-fat or non-fat milk or dairy products.
- ❑ Choose lean meats, poultry, fish, lentils, and beans for protein.
- ❑ Serve reasonably-sized portions.
- ❑ Encourage your family to drink lots of water.
- ❑ Limit sugar-sweetened beverages.
- ❑ Limit consumption of sugar and saturated fat.



Look for ways to make favorite dishes healthier.

- The recipes that you may prepare regularly, and that your family enjoys, with just a few changes can be healthier and just as satisfying.
- For new ideas about how to add more fruits and vegetables to your daily diet check out the recipe database from the FruitsandVeggiesMatter.gov.



A red apple is the central focus, resting on a stack of books. The background is a soft, out-of-focus light blue and white. The text is overlaid on the left side of the image.

Remove calorie-rich temptations!

- Everything can be enjoyed in moderation,
- Reducing the calorie-rich temptations of **high-fat and high-sugar**, or salty snacks can also help your children develop healthy eating habits.
- Instead only allow your children to eat them sometimes, so that they truly will be treats!
- Here are examples of easy-to-prepare, low-fat and low-sugar treats that are 100 calories or less:
 - A medium-size apple
 - A medium-size banana
 - 1 cup blueberries
 - 1 cup grapes
 - 1 cup carrots, broccoli, or bell peppers with 2 tbsp. hummus



Balancing Calories: Help Kids Stay Active

- Engage in an appropriate amount of physical activity and avoid too much sedentary time.
- Health benefits:
 - Strengthening bones
 - Decreasing blood pressure
 - Reducing stress and anxiety
 - Increasing self-esteem
 - Helping with weight management



Help kids stay active.

- At least 60 minutes of moderate intensity physical activity most days of the week, preferably daily.
- Remember that children imitate adults.
- Start adding physical activity to your own daily routine and encourage your child to join you.

Some examples of moderate intensity physical activity include:

- Brisk walking
- Playing tag
- Jumping rope
- Playing soccer
- Swimming
- Dancing



A red apple is the central focus, resting on a light-colored wooden surface. In the background, a stack of books is visible, with the top one being a light blue color. The overall scene is brightly lit, suggesting a clean, organized environment.

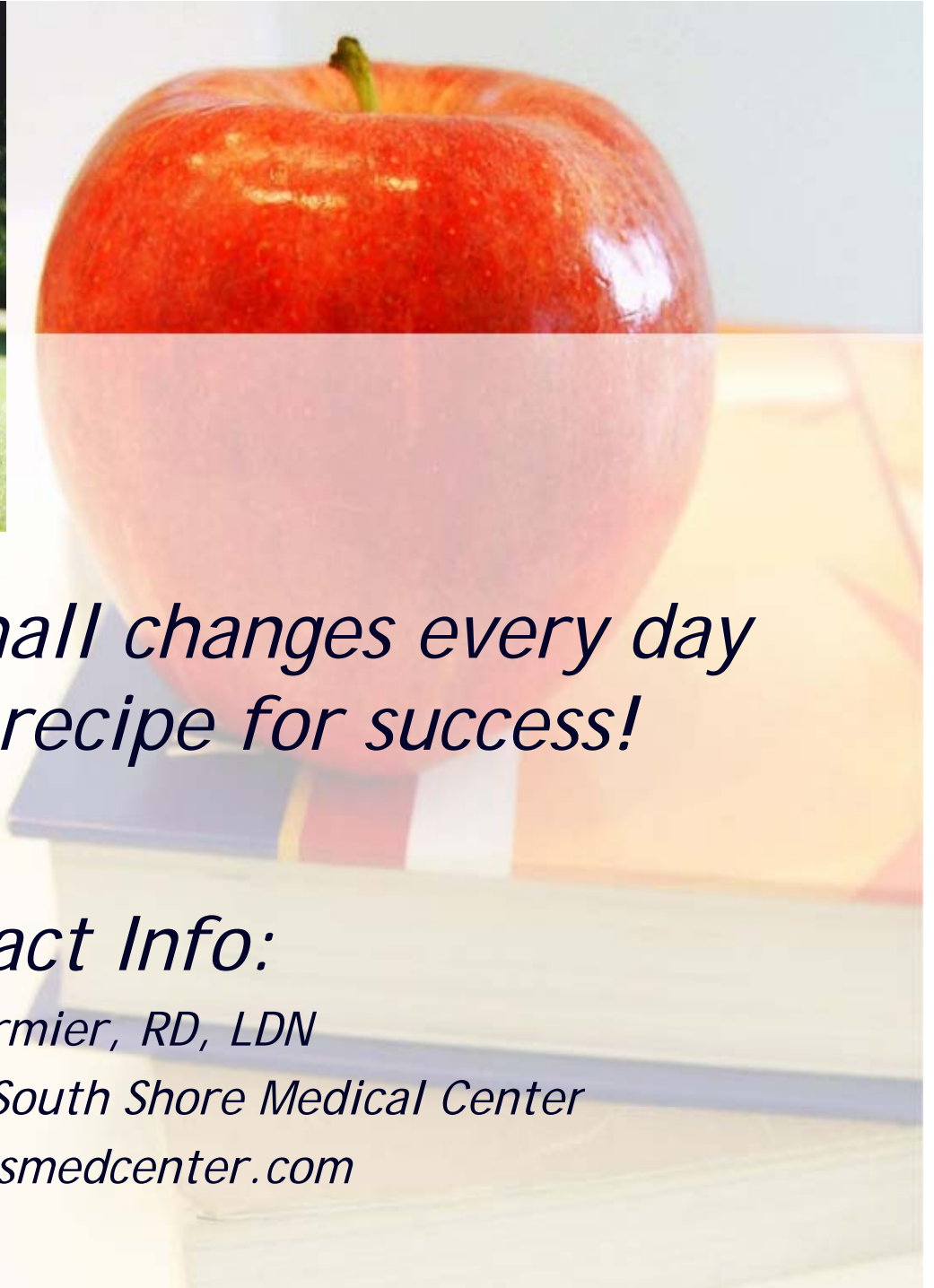
Reduce sedentary time.

- Avoid too much sedentary time.
- Quiet time for reading and homework is fine, limit the time your children watch television, play video games, or surf the web to **no more than 2 hours per day.**
- American Academy of Pediatrics (AAP) does not recommend television viewing for children age 2 or younger.
- Encourage your children to find fun activities to do with family members or on their own that simply involve more activity.

Resources



- MyPyramid.gov
Provides a tailored explanation of how to balance your meals and includes an interactive game for kids.
- FruitsandVeggiesMatter.gov
Great recipes and information about how to incorporate fruits and vegetables in your daily meals.
- [We Can!](#)
This national education program is designed for parents and caregivers to help children 8-13 years old stay at a healthy weight. The booklet "[Finding the Balance: A Parent Resources](#)" offers an array of easy to use practical tips and tools for parents and guardians to help their children and families eat healthy, increase physical activity, and decrease screen time.
- Dietary Guidelines:
<http://www.health.gov/dietaryguidelines/dga2005/document/pdf/brochure.pdf>



*Remember that small changes every day
can lead to a recipe for success!*

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References

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