

# Primary Care Reports



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**Editor's note**—An alarming number of people carry excess body fat. As these overweight and obese adults begin to experience the comorbidities associated with excess adiposity, the clinician is faced with treating the resulting diseases but having few tools to address the underlying weight management problem. Because overweight and obesity in the United States are increasing at rapid rates, the numbers of overweight patients seen in the treatment setting will continue to increase as well. Thus, primary care providers (PCPs) are seeking ways to manage this patient care challenge.

Body mass index (BMI), a calculation that allows a person's weight to be referenced against his/her own height and correlates well with body fatness, is now the preferred screening tool for overweight and obesity. PCPs who implement routine measurement of weight and height that is coupled with calculation and recording of BMI will have a tool for recognizing risk of obesity before the adiposity becomes excessive and resistant to treatment.

PCPs who implement this routine screening and offer basic advice on physical activity, healthy eating, stress management, and body size/shape acceptance will help their patients stabilize weight and improve health measures. This prevention approach has the potential to help control costs associated with treatment of overweight and obesity-related comorbidities.

## Introduction

In Part I of this series, the practitioner was introduced to a

directed review of literature that built a case for weight management and obesity treatment across the life span. Having gained an appreciation from the first article about lifestyle change recommendations that are supported by solid research, the practitioner can make use of the practical ideas offered in this article to implement simple patient education messages about physical activity and healthful eating into routine clinical care.

## Integrating Obesity Treatment and Prevention into Adult Health Care

Providers who hope to be effective in treating and preventing obesity among their patients usually start by making a personal commitment. These providers practice the behaviors they hope to instill in their patients—regular physical activity, healthy food choices, and appropriate stress management. Beyond modeling the behaviors they advise their patients to adopt, effective weight management professionals also provide a supportive environment—having water rather than soft drinks available in waiting areas; providing a bulletin board for announcements about local events that encourage physical activity; stocking the waiting area with supportive literature; etc.

The next step is to make weight management part of routine health care. It is important that accurate height measurements be in each patient's chart. Further, weight should be measured at each patient visit. To preserve self-esteem, especially among those patients who already are overweight

## Obesity: Is it Possible to Prevent an Epidemic? Part II

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and view their heaviness as a social liability, weight needs to be measured discreetly. Scales should be in a private area—not in a hall or other busy place. Those patients who would rather not know what they weigh should have that request honored—the patient can stand backwards on the scale and/or the weight can be taken in kilograms rather than pounds.

Along with routine measurements of height and weight, the provider should be certain that BMI is calculated regularly for each patient. Numerous BMI tables are available, or the provider can calculate BMI using one of the formulas provided in Table 1. BMI should be recorded in a prominent spot in the chart that the provider can find quickly at each subsequent visit. Since each single digit change in BMI reflects a 5-6 lb change in weight, the provider will be looking for any shift upward in BMI that cannot be explained by an increase in muscle mass.

Waist circumference is another routine measurement that can help the PCP provide weight management services. Those who gain abdominal fat may be at increased risk for insulin resistance, glucose intolerance, hypertension, and lipid abnormalities—especially low HDL values and elevated triglycerides.<sup>1</sup> A waist circumference greater than 40 inches in men or greater than 35 inches in women is considered high risk.<sup>1</sup> To assure standardized waist measurements, the tape should be placed in a horizontal plane at the level of the iliac crest.

By making body mass assessment a regular part of each office visit, the provider will be able to note early when changes that could have adverse effects on health are begin-

Table 1. Body Mass Index

**To calculate body mass index:**

$$\text{BMI} = \frac{\text{weight (kg)}}{\text{height squared (m}^2\text{)}}$$

height squared (m<sup>2</sup>)

**To use pounds and inches:**

$$\text{BMI} = \frac{\text{weight (pounds)} \times 703}{\text{height squared (inches)}}$$

height squared (inches)

ning. This allows the provider to intervene with a focus on health rather than on appearance and at a time when weight management is more likely to be successful—before weight gain is excessive.

When the provider gets a patient who is new to the practice, patient history should include questions about what the patient weighed at key life stages (eg, at high school graduation, at the beginning of a marriage, or at the start of the first pregnancy). This will give the provider points against which current body measures can be referenced and will help both patient and provider focus on unintended weight gain across time.

With routine assessment procedures in place, the provider can identify quickly when intervention is warranted. Then, other data assessments also can be important. Since regular physical activity and healthy eating are important components of successful weight management strategies, the provider also will benefit from simple ways to learn this information from patients. Sample activity and dietary assessment tools are shown in Tables 2 and 3.

As providers shift to the counselor/advisor role, their focus should be on patient health rather than on pounds. Thus, the patient's most pressing health concerns will help identify what interventions the provider will ask the patient to attempt first.

Both provider and patient will need to be careful not to attempt too many lifestyle changes at one time. For example, after a brief review of the patient's activity and food habits surveys, a provider might negotiate with a sedentary patient to decrease TV viewing from 3 to 2 hours each day and to switch from regular soft drinks to diet soft drinks or water. By writing these negotiated points on his/her prescription form, the provider can underscore the importance of the recommended changes. The provider further can reinforce these recommendations with 1 or 2 educational brochures and by asking the patient to return for a follow-up visit in 1-2 weeks. At the next visit, if the patient reports success at implementing the suggested changes, the provider will have a sense of the patient's readiness to make lifestyle changes and can provide further guidance and/or refer the patient to other providers or programs.

Many providers prefer maintaining their role as educator and motivator when working with weight management and will refer patients to other community resources for in-depth counseling. Either way, the provider can provide the following key messages to patients:

- increase physical activity—aim for 30 minutes moderate or vigorous activity on most days;
- drink nonfat or 1% milk and water; limit intake of sweetened beverages;

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**Questions & Comments**

Please call **Robin Mason**, Managing Editor, at (404) 262-5517 or e-mail: robin.mason@ahcpub.com between 8:30 a.m. and 4:30 p.m. ET, Monday-Friday.

Table 2. Physical Activity and You

Activity	Times per week
1. How many times each week do you purposely add physical activity to your usual daily routines? (taking steps instead of an elevator; walking rather than driving to work or a store; parking at the far end of a lot rather than close to the store entrance)	_____
2. How many times a week do you participate in an activity that makes your heart beat rapidly? (running/jogging; cross-country skiing; basketball; roller skating; vigorous distance bicycling)	_____
3. How many times each week do you participate in moderate to mild physical activity? (walking; tennis; swimming; golf; easy bicycling; vacuuming; mowing)	_____
Other Leisure Activities	Hours per day
1. How many hours each day do you spend watching TV or movies?	_____
2. How many hours each day do you spend working or playing games on a computer or similar electronic device?	_____

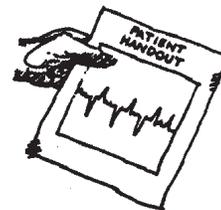
  

<ul style="list-style-type: none"> <li>• increase intake of fruits and vegetables—aim for 9-10 servings/d;</li> <li>• fiber can help you feel full—have 2-3 servings of whole grain foods/d;</li> <li>• pay attention to portion size; avoid “super-sizing” when buying fast foods;</li> <li>• set regular times to eat; 3 meals and 2 snacks makes a good pattern;</li> <li>• limit salt and sodium intake; aim for no more than 1500-2400 mg sodium/d;</li> <li>• limit total and saturated fat</li> </ul>	<p>environments. This can include helping identify facilities for indoor activity during inclement weather; working with schools to find ways to include regular physical activity in the curriculum; limiting access to soft drinks in schools; supporting fund-raising efforts that use activity or healthy foods for incentives; participating in community walks/runs; advocating for community walking/biking paths; helping assure safe places for play; etc.</p>
<p>Ideally, the provider’s entire office will be involved in supporting weight management efforts. Personnel in the reception area can distribute activity and food habit surveys for patients to complete while they are waiting to see their provider. In the examination area, clinical support personnel can assure that accurate height, weight, and waist circumference measures get recorded in the patient record and can calculate BMI. Also, clinical support personnel quickly can review activity and food habits surveys to answer patient questions and to be sure the forms are ready for the provider to review.</p>	<p><b>Integrating Obesity Treatment and Prevention into Pediatric Health Care</b></p> <p>As with adults, measuring and recording height and weight are important components of a weight management program for children. CDC growth charts for boys and girls ages 2-20 allow providers to plot BMI for age and follow changes across maturation. (See Tables 4 and 5.)</p>
<p>The provider and other office personnel can work together to identify community resources to help patients with weight management. Providers can identify other competent and empathetic weight management professionals, such as registered dietitians, psychologists, and exercise science specialists. Further, the provider can keep lists of acceptable commercial weight management programs. Fitness facilities, both nonprofit and commercial, also should be identified. Motivated patients should be encouraged to add strength/resistance training to their physical activity routines. Increase in lean body mass from muscle building will lead to an increase in resting metabolic rate and can be an important positive factor in weight management.</p>	<p>These charts are screening tools that should be maintained for all pediatric patients. BMI for age above the 95th percentile is considered overweight; BMI for age from the 85th to 95th percentile is classified as “at risk” for obesity; and BMI for age less than the 5th percentile is considered underweight. (Download growth charts at: <a href="http://www.cdc.gov/growthcharts/">http://www.cdc.gov/growthcharts/</a>.)</p>
<p>Many PCPs who help their patients with weight management also work to establish supportive community policies and</p>	<p>With the BMI plotted across time, the PCP can assess if weight fits with expected growth. Parental heights and family body shapes and sizes should be considered, as should stage of puberty. If weight seems to be more than expected for genetic and maturational influences, the provider will want to assess eating and activity patterns. For young children, parents can complete activity and food habits surveys, but older children and teens can complete their own. Data obtained should be interpreted in terms of both medical and psycho-social risks.</p>
	<p>When the child’s weight matches expected growth, the provider can use this teaching opportunity to reinforce healthy lifestyles and to promote body/size acceptance. When the child is overweight or at risk for over-</p>

**Continued on page 132**

Your doctor would like some information about your usual food habits to help plan the best possible health care for you. Please complete all sections as completely and accurately as possible.

# Food Habits Survey



Name \_\_\_\_\_

Date \_\_\_\_\_

Who purchases food at your home? \_\_\_\_\_

Who prepares? \_\_\_\_\_

What kind of meat do you usually buy?  regular cuts  lean cuts

How do you usually prepare meat?  
 fry  bake  broil  
 stew/slow cook

How many snacks do you eat each day? \_\_\_\_\_

How many meals? \_\_\_\_\_

How many times each week do you eat away from home? \_\_\_\_\_

What restaurant do you go to most often? \_\_\_\_\_

Do you take any vitamin or mineral tablets?  yes  no

If yes, please list the kinds and the amounts: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Do you eat any special foods for health or personal choice reasons?  Yes  No

If yes, please list the kinds and amounts: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Do you add salt to your food at the table?  Yes  No

Do you add salt to foods when you cook?  Yes  No

## Sample Survey

The sample *Food Habits Survey* for Fred shows what he eats in a day from two food groups - Grain Products and vegetables. Look to see how he filled it out.

Fred usually eats 2 or 3 slices of bread and toast a day, so he wrote "2-3" in the blank beside "slice of bread." He eats a roll most days. He has a large bowl of cold cereal for breakfast, so he wrote in "2" because it's about the size of 2 small bowls. Fred usually has 2 helpings of vegetables a day, so he wrote "2" on the line for "scoop-sized helping of vegetables." He also has a small salad nearly every day.

### Grain Products

- 2-3 slice of bread
- \_\_\_\_\_ tortilla
- 1 small roll, biscuit, or muffin
- \_\_\_\_\_ 1/2 bun, English muffin, or bagel.
- \_\_\_\_\_ small helping of cooked cereal, rice or pasta
- 2 small bowl of cold cereal

### Vegetables

- 2 scoop-sized helping of vegetables
- 1 small vegetable salad
- \_\_\_\_\_ medium-sized potato

Now you fill out the complete form below to show what you eat in a normal day.

### Grain Products

- \_\_\_\_\_ slice of bread
- \_\_\_\_\_ tortilla
- \_\_\_\_\_ small roll, biscuit, or muffin
- \_\_\_\_\_ 1/2 bun, English muffin, or bagel
- \_\_\_\_\_ small helping of cooked cereal, rice, or pasta
- \_\_\_\_\_ small bowl of cold cereal

### Vegetables

- \_\_\_\_\_ scoop-sized helping of vegetables
- \_\_\_\_\_ small vegetable salad
- \_\_\_\_\_ medium-sized potato

### Fruits

- \_\_\_\_\_ piece of fruit (an apple, orange, banana, slice of melon, etc.)
- \_\_\_\_\_ 1/2 cup cooked or canned fruit or berries
- \_\_\_\_\_ small glass of fruit juice

### Milk

- \_\_\_\_\_ glass of whole milk
- \_\_\_\_\_ glass of 2% milk
- \_\_\_\_\_ glass of 1% or skim milk
- \_\_\_\_\_ slice of cheese
- \_\_\_\_\_ helping of yogurt or cottage cheese
- \_\_\_\_\_ small scoop of ice cream

### Meat or Meat Alternatives Group

- \_\_\_\_\_ small piece of meat, fish, or poultry (about the size of a deck of cards)
- \_\_\_\_\_ 2 eggs
- \_\_\_\_\_ 1 cup of cooked dried beans or peas
- \_\_\_\_\_ 4 tablespoons of peanut butter

### Mixed Foods

- \_\_\_\_\_ small square of lasagna
- \_\_\_\_\_ small serving of spaghetti with meat sauce
- \_\_\_\_\_ small serving of macaroni and cheese
- \_\_\_\_\_ taco
- \_\_\_\_\_ burrito
- \_\_\_\_\_ slice of pizza

### Beverages

- \_\_\_\_\_ cups of regular coffee
- \_\_\_\_\_ cups of decaf coffee
- \_\_\_\_\_ cups of regular tea
- \_\_\_\_\_ cups of decaf tea
- \_\_\_\_\_ 12 ounce soft drinks
- \_\_\_\_\_ 12 ounce diet drinks
- \_\_\_\_\_ glass of Kool-aid or fruit punch
- \_\_\_\_\_ glass of water

### Sweets and Fats

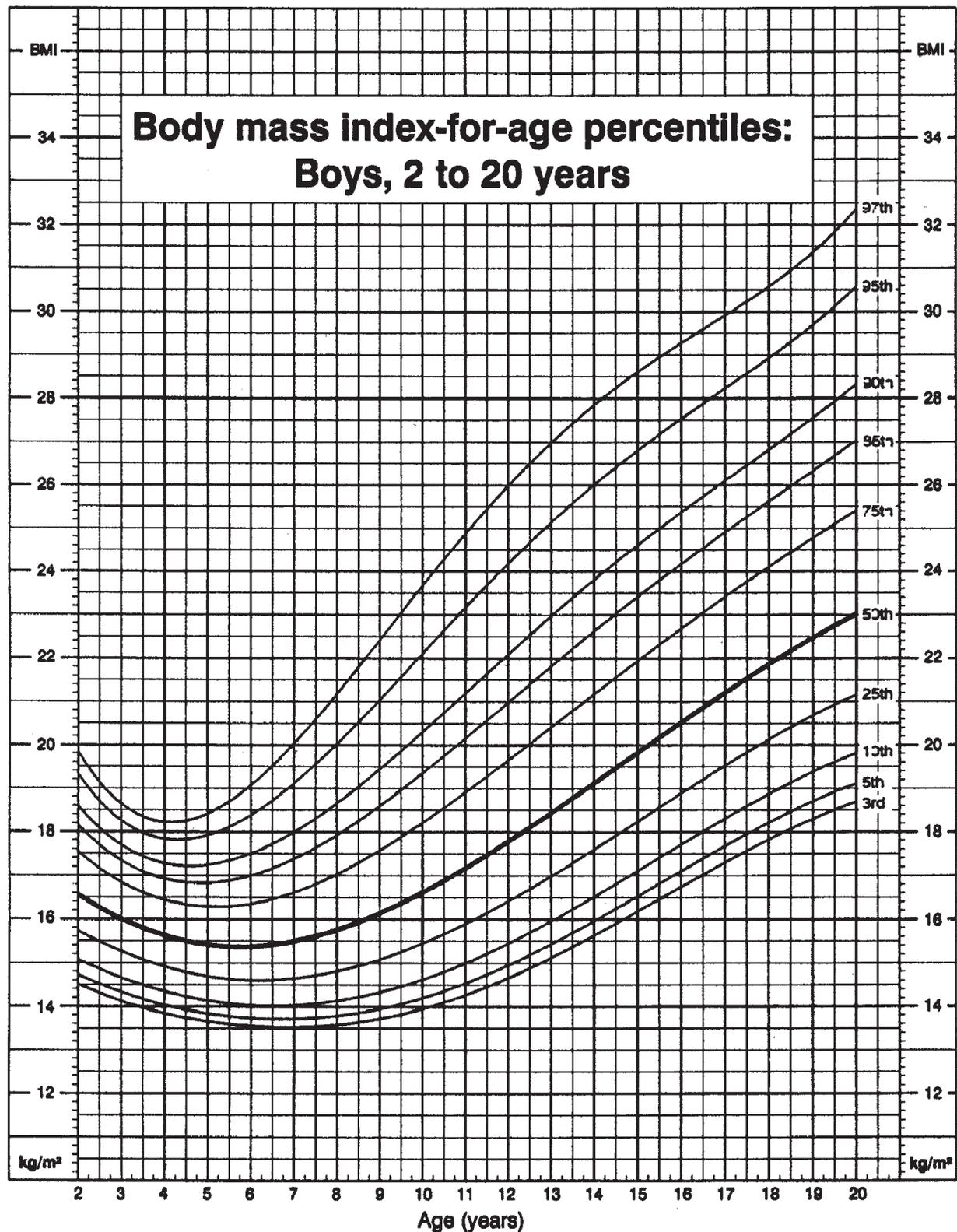
- \_\_\_\_\_ sweet roll or doughnut
- \_\_\_\_\_ slice of pie or cake
- \_\_\_\_\_ 3 small cookies
- \_\_\_\_\_ candy bar
- \_\_\_\_\_ 10 chips or french fries
- \_\_\_\_\_ rounded teaspoonful of margarine or butter
- \_\_\_\_\_ tablespoonful of salad dressing

### Alcohol

- \_\_\_\_\_ 12 ounce beer
- \_\_\_\_\_ 4 ounces of wine (small glass)
- \_\_\_\_\_ shot of liquor

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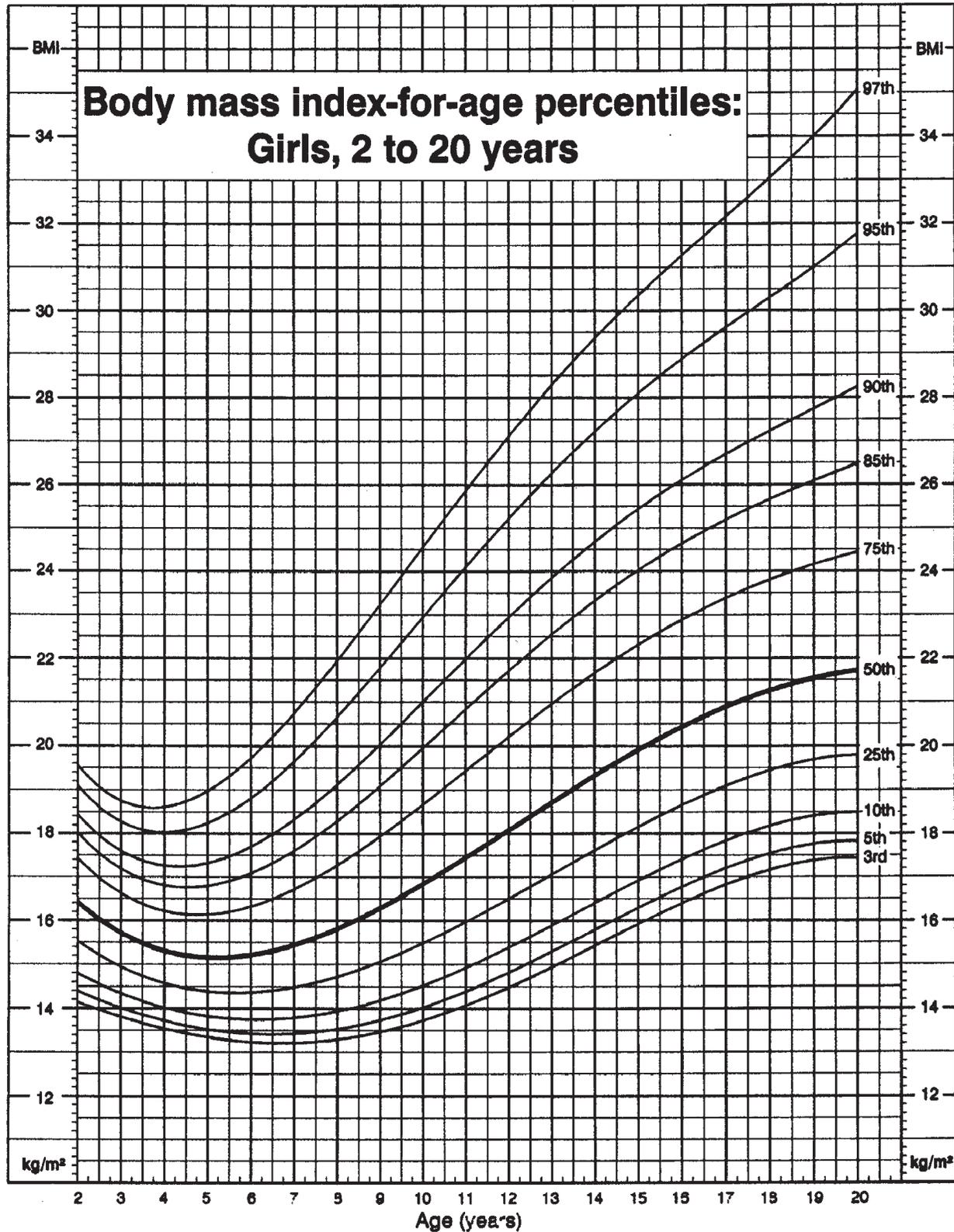
Table 4. CDC Growth Charts: United States



SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



Table 5. CDC Growth Charts: United States



SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).



Table 6. Physical Activities for Children and Teens

- Aim for at least 60 minutes total per day
- Be spontaneously active.
- Play tag.
- Jump rope.
- Ride a bicycle or tricycle.
- Play actively during school recess.
- Take part in physical education activity classes during school.
- Join after-school or community physical activity programs.
- Dance.
- Walk, wheel, skip, or run.

Source: U.S. Department of Agriculture. *Dietary Guidelines for Americans, 2000.*

Table 7. Food Guide Pyramid



### WHAT COUNTS AS A SERVING?

#### Bread, Cereal, Rice, and Pasta Group (Grains Group)—whole grain and refined

- 1 slice of bread
- About 1 cup of ready-to-eat cereal
- 1/2 cup of cooked cereal, rice, or pasta

#### Vegetable Group

- 1 cup of raw leafy vegetables
- 1/2 cup of other vegetables—cooked or raw
- 3/4 cup of vegetable juice

#### Fruit Group

- 1 medium apple, banana, orange, pear
- 1/2 cup of chopped, cooked, or canned fruit
- 3/4 cup of fruit juice

#### Milk, Yogurt, and Cheese Group (Milk Group)\*

- 1 cup of milk\*\* or yogurt\*\*
- 1 1/2 ounces of natural cheese\*\* (such as Cheddar)
- 2 ounces of processed cheese\*\* (such as American)

#### Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts Group (Meat and Beans Group)

- 2–3 ounces of cooked lean meat, poultry, or fish
- 1/2 cup of cooked dry beans<sup>#</sup> or 1/2 cup of tofu counts as 1 ounce of lean meat
- 2 1/2-ounce soyburger or 1 egg counts as 1 ounce of lean meat
- 2 tablespoons of peanut butter or 1/3 cup of nuts counts as 1 ounce of meat

NOTE: Many of the serving sizes given above are smaller than those on the Nutrition Facts Label. For example, 1 serving of cooked cereal, rice, or pasta is 1 cup for the label but only 1/2 cup for the Pyramid.

\* This includes lactose-free and lactose-reduced milk products. One cup of soy-based beverage with added calcium is an option for those who prefer a non-dairy source of calcium.

\*\* Choose fat-free or reduced-fat dairy products most often.

<sup>#</sup> Dry beans, peas, and lentils can be counted as servings in either the meat and beans group or the vegetable group. As a vegetable, 1/2 cup of cooked, dry beans counts as 1 serving. As a meat substitute, 1 cup of cooked, dry beans counts as 1 serving [2 ounces of meat].

Source: U.S. Department of Agriculture. *Dietary Guidelines for Americans, 2000.*

Table 8. How Many Servings Do You Need Each Day?

Food group	Children ages 2 to 6 years, women, some older adults (about 1,600 calories)	Older children, teen girls, active women, most men (about 2,200 calories)	Teen boys, active men (about 2,800 calories)
Bread, Cereal, Rice, and Pasta Group (Grains Group)—especially whole grain	6	9	11
Vegetable Group	3	4	5
Fruit Group	2	3	4
Milk, Yogurt, and Cheese Group (Milk Group)—preferably fat free or low fat	2 or 3*	2 or 3*	2 or 3*
Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts Group (Meat and Beans Group)—preferably lean or low fat	2, for a total of 5 ounces	2, for a total of 6 ounces	3, for a total of 7 ounces

Adapted from U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. The Food Guide Pyramid, Home and Garden Bulletin Number 232, 1996.

\* The number of servings depends on your age. Older children and teenagers (ages 9 to 18 years) and adults over the age of 50 need 3 servings daily. Others need 2 servings daily. During pregnancy and lactation, the recommended number of milk group servings is the same as for nonpregnant women.

basic teaching tool. (See Table 7.) Number of servings needed from each food group varies according to age, gender, size, and physical activity level, but general guidelines are provided. (See Table 8.)

### Summary

By screening for BMI across the life span, primary care providers can help their patients recognize when they are at risk for becoming overweight and can help them implement healthy behaviors before excess weight becomes refractory to treatment. Intervention should focus on decrease in sedentary behaviors, increase in physical activity, adoption of healthy eating patterns, and acceptance of normal (genetic) variation in body size and shape. Because lifestyle counseling is complex, most providers will want to identify and organize a team of weight management professionals in their communities.

### References

1. National Heart, Lung, and Blood Institute. Clinical guidelines on the identification, evaluation, and treatment of overweight and obesity in adults—the evidence report. *Obes Res.* 1998;6(suppl 2): S51-S290.
2. U.S. Department of Agriculture and the U.S. Department of Health and Human Services. *Dietary Guidelines for Americans, 2000*. Fifth Edition, 2000. Home and Garden Bulletin No. 232.

### Physician CME Questions

3. As a primary care provider, some helpful suggestions you could offer patients regarding weight management include:
  - a. limiting intake of sweetened beverages.
  - b. increasing intake of fruits and vegetables.
  - c. paying attention to avoid extra portions at fast-food restaurants.
  - d. trying to have 2-3 servings of whole grain foods per day.
  - e. All of the above
4. According to the CDC growth charts for boys and girls ages 2-20, BMI for age above what percentile is considered “at risk” for obesity?
  - a. 85th-95th percentile
  - b. Above the 95th percentile
  - c. Below the 5th percentile
  - d. None of the above

**Continued from page 127** weight, the provider can begin by reinforcing positive behaviors and then negotiate ways to decrease sedentary behaviors such as television viewing, to increase physical activity, and to improve food choices. Providers should be sensitive to maintaining or enhancing the heavy child’s self-esteem. If referral is warranted, comprehensive family-based weight management programs that include a psychosocial component and counseling with a registered dietitian are preferred.

Because the PCP will be in the position of seeing the child across time, his or her role remains central for weight management success. The provider can schedule regular follow-up visits to monitor progress and to reinforce and encourage positive lifestyle changes. As with adults, success should not be measured in pounds. Rather, children who are successful with weight management will lead more physically active lives, will adopt healthy eating patterns, will improve their self-esteem, will normalize medical measures such as blood pressure and lipids, and will stabilize or decrease rate of weight gain.

At follow-up visits, the PCP can use simple educational messages to underscore the importance of the lifestyle changes the child and his/her family are trying to implement. A good source for helpful advice is *Dietary Guidelines for Americans, 2000*,<sup>2</sup> and a sample message from that resource is shown in Table 6. The USDA Food Guide Pyramid serves as another

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