

Chapter 1 – When Weight is an Issue

The numbers don't lie. Children all around the world are gaining more weight faster than ever before. Despite this, there are good reasons to be optimistic. Several studies have found that there are proven strategies that encourage kids to develop healthy eating and activity patterns help them to stop gaining excess weight and let them “grow into” a healthy weight. Compared to adults, healthy-weight efforts that are directed toward kids are more successful at keeping weight in the healthy range long-term than they are with adults.

Some Definitions

BMI stands for Body Mass Index, a number that is used to evaluate body weight.

Overweight is the term used for children with a very high BMI for their age. Adults with a comparable BMI are defined as **obese**.

At risk of overweight is used for children whose BMI is between the healthy and overweight ranges. Adults with comparable BMIs are classified as overweight.

In this book, the terms **obese** and **obesity** are not used to refer to children who have a specific BMI, but rather to characterize the medical issues of excess weight in children and adults.

A Closer Look at BMI

Researchers around the world need technical definitions so that they can put studies into a common context. When it comes to weight, the definitions are based on a number called the Body Mass Index (BMI). BMI is used to evaluate body weight in both children and adults. For most people, BMI is a good indicator of the amount of fat on the body. BMI can be calculated by plugging one's body weight and height into the BMI formula, or it can be looked up on a chart. The BMI calculation is the same for everyone -- men and women, adults and children. Adults can find out their BMI by checking the BMI chart on any of a number of government or health organization websites.

Websites for determining adult BMI

www.WeightWatchers.com

www.consumer.gov/weightloss/bmi.htm

www.nhlbi.nih.gov/guidelines/obesity/bmi_tbl.htm

www.shapeup.org

www.obesity.org

Weight-related categories for adults, namely underweight, healthy weight, overweight, and obese, are determined by dividing BMIs into ranges. For adults, a BMI of 19 or lower is considered underweight, a BMI of 19 to 24.9 is a healthy weight, a BMI between 25 and 29.9 is overweight, and a BMI of 30 or more is obese. The categories and BMI cut-off points are the same for adult men and women of all ages.

The BMI calculation for children uses the same formula as for adults and is based on weight and height (or length for very young children). Charts called BMI-for-age charts (CDC) are used to track a child's growth over time. The BMI charts for children consider the child's age because BMIs change depending on a child's state of development. And because boys and girls grow and develop differently by age, separate BMI charts are used for boys and for girls.

Pediatricians include the BMI-for-age growth chart in a child's medical record. At each routine visit, the pediatrician or nurse plots BMI-for-age on the growth chart and compares the result to standards for the child's age, as well as standards for growth over time.

Parents often ask ...

Won't our pediatrician tell us if our child's weight is higher than the healthy range?

While this would be ideal and professional pediatric organizations are encouraging doctors to include this information as part of routine care, some pediatricians do not always share this information with you. It may be because they have their minds on something else or they may assume that you already know it. The bottom line is, if the doctor does not tell you your child's BMI-for-age, ask. [end box]

BMI-for-age is not as simple as weight, but it is a more accurate way to evaluate a child's body weight. It corresponds well to levels of body fat – a high BMI-for-age usually means that a child has a lot of body fat. Pediatricians use BMI-for-age to follow a child's body size from childhood through adolescence and into adulthood.

Parents often ask

How can I tell if my child is overweight or just big for his age?

It is very difficult simply to look at a child and tell if he is overweight. As kids grow and develop, their body shape changes. The only real way to know the difference between big and overweight is to plot the information on a BMI-for-age chart. Because this information is part of your child's medical record, a quick call to the doctor's office can tell you.

How BMI Changes as a Child Grows

The BMI-for-age chart helps pediatricians tell the difference between normal weight gain during growth and too much weight gain. Looks can be deceiving when it comes to weight in children, so healthcare professionals rely on the BMI-for-age chart to guide them. For example, it is not uncommon for infants and toddlers to look chubby but have a BMI in the healthy range.

BMI, body shape, and body size change throughout childhood. As a child moves from being a toddler to a preschooler, BMI typically drops and growth slows to about 2.5 pounds of weight per inch of height growth. After the preschool years, BMI gradually increases. Going from the late elementary school years and into the very beginning of puberty, children's bodies can look very different from each other. Some kids grow much faster than others and body shapes change. Some children gain body fat before they grow taller because their body is storing fat to prepare for the rapid growth spurt that goes with puberty.

During puberty, boys' and girls' bodies change in different ways. A boy's body adds muscle and usually loses body fat, but boys develop more fat in their bellies. A girl's body adds both muscle and body fat, with fat going to her breasts, hips, and buttocks. Research has shown that girls are more likely than boys to gain excess weight during adolescence.

Parents often ask ...

One of my children is really thin. Does that mean she is anorexic?

Not necessarily. Anorexia nervosa, a medically diagnosed eating disorder, has several characteristics in addition to a low weight, including things like voluntary starvation, excess exercise, eating rituals, and an abnormal perception of body weight. If you have any concerns about your daughter, it's worth a trip to your family doctor (with a call before the visit to discuss your concerns) for an evaluation. If needed, your doctor will be able to refer you to other professionals for more help (we discuss this in Chapter 15).

Why Children Are Not Obese

Strictly speaking, there are no obese children. Although people often use the terms "overweight" and "obese" when describing children with excess weight, obese does not apply to children. The U.S. Centers for Disease Control and Prevention (CDC) uses only "risk of overweight" or "overweight" for children and adolescents whose BMI-for-age is above the healthy weight range.

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General guidelines for gender-specific BMI cut-offs

	Boys		Girls	
Age	At Risk for Overweight if BMI is greater than:	Overweight if BMI is greater than:	At Risk for Overweight if BMI is greater than:	Overweight if BMI is greater than:
2 years	18.2	19.3	18.0	19.1
5 years	16.8	17.9	16.8	18.3
8 years	18.7	21.2	18.3	20.7
13 years	23.0	27.0	23.8	28.3
18 years	26.9	30.6	27.3	33.1

www.cdc.gov/growthcharts/

It is not uncommon for people, including the media and many health professionals, to use the terms “overweight” and “obese” and not be referring to the technical definitions. Since BMI standards for overweight in children correspond closely with BMI standards for obese in adults, people often treat the two words as if they mean the same thing. This makes reading articles in newspapers, magazines, or even medical journals confusing because it can be hard to figure out exactly which weight classifications are being referred to. Generally, if an information source refers to childhood obesity, it most likely means that the children were in the overweight category.

BMI Links Between Childhood and Adulthood

Kids with a high BMI-for-age are more likely to become obese adults. The longer a child is overweight, the more likely it is that he or she will have adult weight issues.

About 33% of preschool children with excess weight become obese adults. About 50% of school-age children will do so. In general, children with a high BMI are twice as likely to develop adult obesity as children whose BMI is in the healthy range. The risk is greatest for children who have the highest BMI and who maintain a high BMI at older ages.

Parents often ask

If my child is already overweight, does that mean she will automatically become an obese adult?

While overweight children have a greater risk of taking their excess weight into adulthood, it is not true for everyone. In fact, half of school-age children who are overweight do not become obese adults. Children who are already overweight benefit by living in a healthy-weight home and either preventing more weight gain or reducing weight.

Children who carry excess weight with them into adulthood are also more likely to have weight-related illnesses, including heart disease and diabetes. The bottom line is that preventing excess weight gain at as early an age as possible is ideal. Bringing a high BMI down into the healthy range is also important. Beyond health issues, there are also avoidable social and financial consequences to being an overweight teen.

While sobering, these findings should not be discouraging. Children have a distinct advantage over adults when it comes to weight management. They need more calories as they grow, so it is simpler to make small changes in eating and activity patterns that can have a big impact on their body weight. Moreover, children who learn the principles of a healthy-weight lifestyle are likely to apply them to their adult lives, leaving them with the legacy of a healthy weight.

Weight-Loss Recommendations

Current recommendations for the treatment of overweight in children have two goals. The first is to make sure that the child grows and develops normally. The second is to help the child gradually reach a healthy weight. Experts in the field of childhood obesity developed their weight-related recommendations with these two goals in mind.

Experts agree that it is best to start early, with children as young as three years of age. One strategy for young children is to slow their rate of weight gain so that their BMI-for-age does not keep going up. For example, a goal for very young children (two to four years of age) whose BMI-for-age is near the top of the range might be to limit weight gain to less than two pounds for every inch of growth. The other often recommended strategy is to maintain the child's weight while the child grows. As the child gets taller, BMI-for-age drops into the healthy-weight range. This approach is often recommended for children who are four years of age or older and who do not have medical problems from their weight.

Weight loss usually is not recommended for children up to seven years of age. The exception is the child with a BMI in the overweight range who already has a weight-related medical condition like high blood pressure or high blood cholesterol.

The recommendations are similar for children older than seven years of age. The goal for children whose BMI-for-age puts them in the at risk of overweight range is to maintain a steady weight as they grow taller. Children who are older than seven years, have a medical complication due to their weight, and have a high BMI might be encouraged to lose weight.

Adult-based weight loss programs are not appropriate for children, except for older teens who have reached their adult height and have a BMI of at least 30.

Recommendations Summary

Age	Range of BMI-for-age	Weight-related Health complications	Treatment
Up to 7 years	At risk of overweight, overweight	No	Weight maintenance
Up to 7 years	Overweight	Yes	Consider weight loss
Older than 7 years	At risk of overweight	No	Weight maintenance
Older than 7 years	At risk of overweight, overweight	Yes	Weight loss
Late teen years	BMI of at least 30	Yes or no	Weight loss on adult program

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Weight-loss recommendations should be based on the age of the child, the degree of overweight, and the presence of any weight-related medical problems. Even when weight loss is recommended, it should be done in a slow and gradual way. The current recommendation is that children should not lose more than an average of one pound per month unless they are under the direct supervision of a pediatrician with experience in weight management. Even under a doctor's supervision, experts recommend a slow and gradual weight loss.

[begin box] Parents often ask

Why is the recommended rate of weight loss so much lower for kids than adults?

For several reasons, there is a big difference between the one to two pounds per week recommendation for adults and the one pound per month for kids. First, the nutritional needs of children are higher and they need a fair amount of food and calories to make sure that those needs are met. In addition, the slower weight is lost, the more likely it will stay off. Finally, to lose weight at a more rapid pace, a child would have to make big changes in the calorie balance equation. This can only be done with a highly structured program and this type of approach usually backfires with kids. [end box]

Small weight changes can add up over the course of the year. For example, losing a pound per month becomes 12 pounds after a year. Add a couple inches of growth and it is likely that BMI-for-age will drop even more. Slow weight loss lets a child grow taller at a normal rate and helps maintain muscle mass. Gradual loss is achievable. In addition, the eating patterns that provide for slow weight loss are easier to sustain and fuel normal growth and development.

Parents often ask

Should I weigh my child and, if so, how often?

It is generally not a good idea to weigh a child because it sends the message that weight is very important. Because children are weighed as a regular part of their medical care, it is better to limit the actual weighing to those visits. As a week-to-week indicator, the way clothes are fitting gives you a good idea of what is going on.