

UNDERSTANDING

# Childhood Obesity



An educational resource provided by



## What is Childhood Obesity?

Childhood obesity affects more than 30 percent of children, making it the most common chronic disease of childhood.

Today, more and more children are being diagnosed with diabetes, hypertension and other co-morbid conditions associated with obesity and severe obesity.

A child is affected by obesity if their body mass index-for-age (or BMI-for-age) percentile is greater than 95 percent. A child is affected by excess weight (or classified as "overweight") if their BMI-for-age percentile is greater than 85 percent and less than 95 percent.



## Causes of Childhood Obesity

Although the causes of childhood obesity are widespread, certain factors are targeted as major contributors to this epidemic. Causes associated with childhood obesity include:

- Environment
- Lack of physical activity
- Heredity and family
- Dietary patterns
- Socioeconomic status

## Environment

Today's environment plays a major role in shaping the habits and perceptions of children and adolescents. The prevalence of television commercials promoting unhealthy foods and eating habits is a large contributor. In addition, children are surrounded by environmental influences that demote the importance of physical activity.

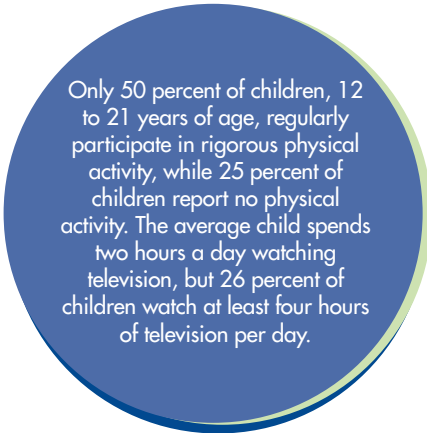
Today, it is estimated that approximately 40 to 50 percent of every dollar that is spent on food is spent on food outside the home in restaurants, cafeterias, sporting events, etc. In addition, as portion sizes have increased, when people eat out they tend to eat a larger quantity of food (calories) than when they eat at home.

Beverages such as soda and juice boxes also greatly contribute to the childhood obesity epidemic. It is not uncommon for a 32 ounce soda to be marketed toward children, which contains approximately 400 calories. The consumption of soda by children has increased throughout the last 20 years by 300 percent. Scientific studies have documented a 60 percent increase risk of obesity for every regular soda consumed per day. Box drinks, juice, fruit drinks and sports drinks present another significant problem. These beverages contain a significant amount of calories and it is estimated that 20 percent of children who are currently overweight are overweight due to excessive caloric intake from beverages.

## Lack of Physical Activity

Children in today's society show a decrease in overall physical activity. The growing use of computers, increased time watching television and decreased physical education in schools all contribute to children and adolescents living a more sedentary lifestyle.

Another major factor contributing to the childhood obesity epidemic is the increased sedentary lifestyle of children. School-aged children spend most of their day in school where their only activity comes during recess or physical education classes. In the past, physical education was required on a daily basis. Currently, only 8 percent of elementary schools and less than 7 percent of middle schools and high schools have daily physical education requirements in the U.S.



Only 50 percent of children, 12 to 21 years of age, regularly participate in rigorous physical activity, while 25 percent of children report no physical activity. The average child spends two hours a day watching television, but 26 percent of children watch at least four hours of television per day.

## Heredity and Family

Science shows that genetics play a role in obesity. It has been proven that children with parents affected by obesity are more likely to be affected by obesity as well. Estimates say that heredity contributes between 5 to 25 percent of the risk for obesity. However, genes alone do not always dictate whether a child is affected by excess weight or obesity. Learned behaviors from parents are a major contributor. Parents, especially of those whose children are at risk for obesity at a young age, should promote healthy food and lifestyle choices early in their development.

## Dietary Patterns

Over the past few decades, dietary patterns have changed significantly. The average amount of calories consumed per day has dramatically increased, yet the quality of nutrients needed for a healthy diet has decreased.

Food portions also play an important role in the unhealthy diet patterns that have evolved. The prevalence of "super size" options and "all you can eat" buffets create a trend in overeating. Combined with a lack of physical activity, children are consuming more and expending less.

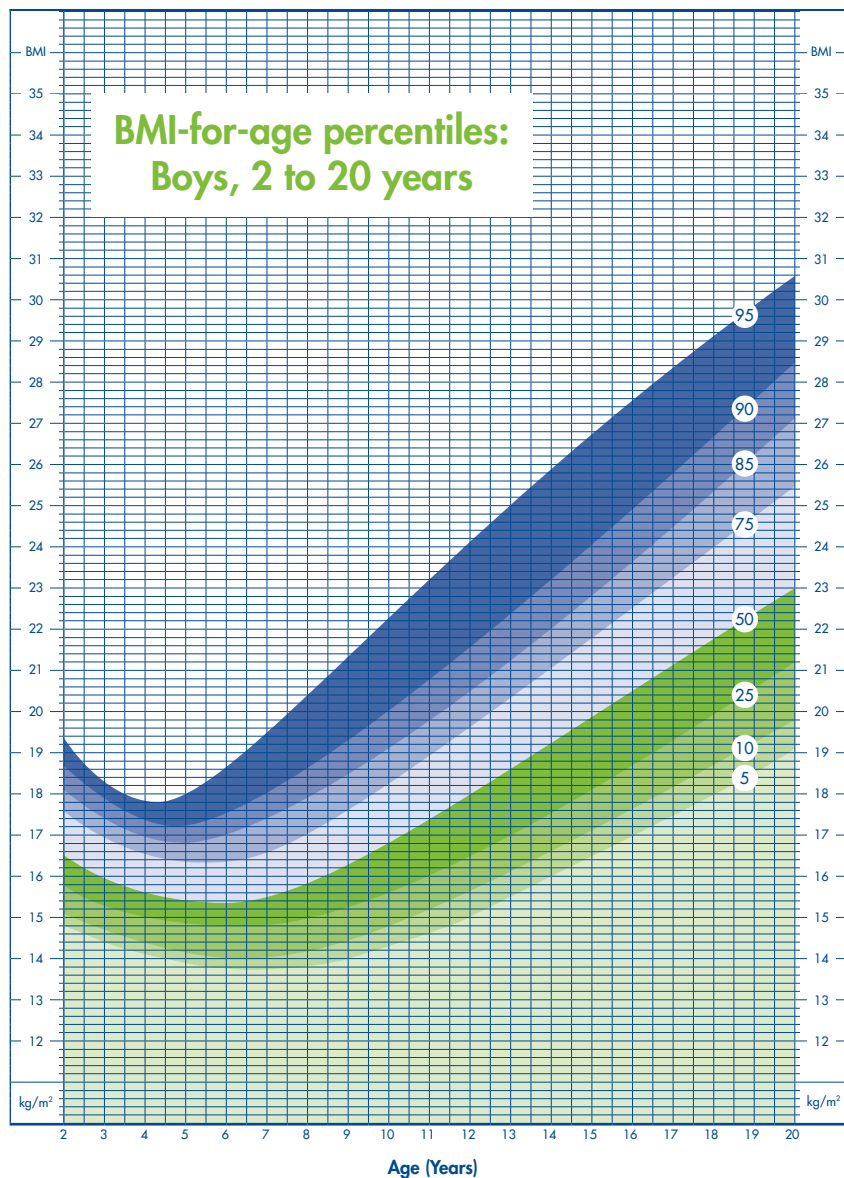
## Socioeconomic Status

Children and adolescents that come from lower-income homes are at greater risk of being affected by obesity. This is a result of several factors that influence behaviors and activities. Lower-income children cannot always afford to partake in extracurricular activities, resulting in a decrease in physical activity. In addition, families who struggle to pay bills and make a living often opt for convenience foods, which are higher in calories, fat and sugar.

Educational levels also contribute to the socioeconomic issue associated with obesity. Parents with little to no education have not been exposed to information about proper nutrition and healthy food choices. This makes it difficult to instill those important values in their children.

# Measuring Obesity in Children

Obesity in children is determined by using BMI-for-age percentiles. BMI-for-age percentiles have emerged as the favored method to measure weight status in children. This method calculates your child's weight category based on age and BMI, which is a calculation of weight and height. However, it should be kept in mind that this method, among other methods, should be used as a tool, and only a physician can best determine and diagnose weight status in your child.



Weight Status category	Percentile range
Underweight	Less than 5th percentile
Healthy Weight	5th - 85th percentile
Overweight	85th - 95th percentile
Obesity	95th percentile and greater

5th percentile 10th percentile 25th percentile 50th percentile 75th percentile 85th percentile 90th percentile 95th percentile

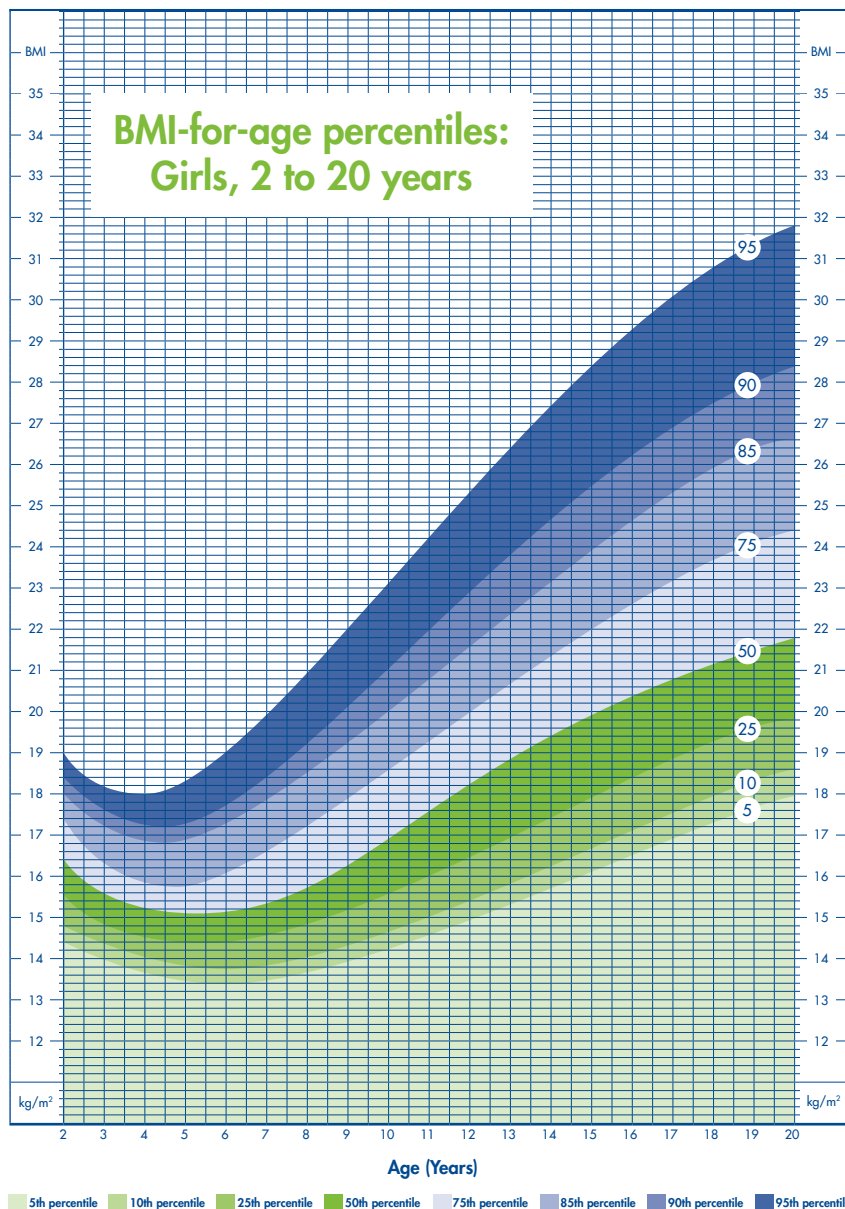
Published May 30, 2000 (modified 10/16/00)  
SOURCE: Developed by the National Center for Health Statistics in collaboration with the  
National Center for Chronic Disease Prevention and Health Promotion(2000).  
<http://www.cdc.gov/growthcharts>



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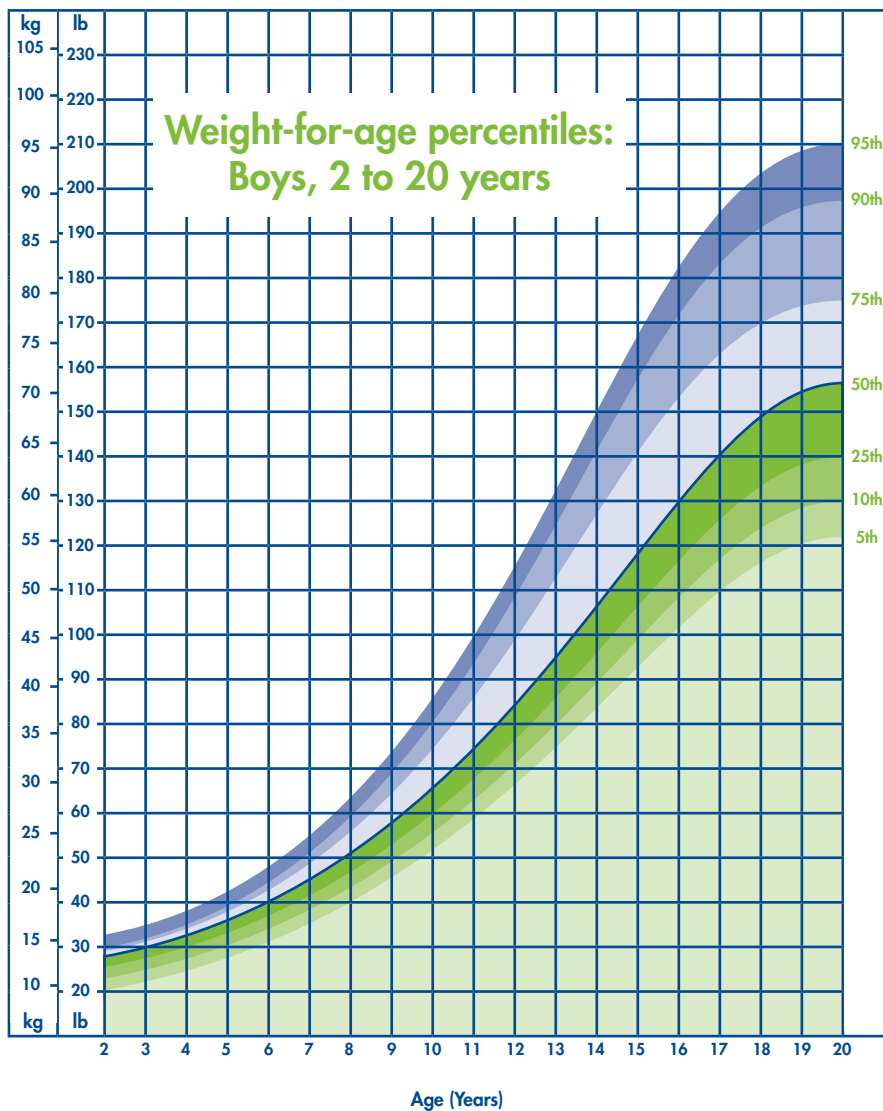
To plot your child's BMI-for-age percentile, you must first calculate his/her BMI. Please see page 8 for a BMI chart which includes weight and heights appropriate for children. Once you calculate his/her BMI, find the age of your child on the bottom of the BMI-for-age percentile chart and look to the left or right to locate their BMI. Plot the point on the graph using a pen or pencil. Once you have plotted the measurement, locate the corresponding shaded color on the bottom of the chart to determine your child's BMI-for-age percentile. You are then able to find your child's weight status by viewing the Weight Status Category table located to the right of the chart.



Weight Status category	Percentile range
Underweight	Less than 5th percentile
Healthy Weight	5th - 85th percentile
Overweight	85th - 95th percentile
Obesity	95th percentile and greater

# Measuring Growth in Children

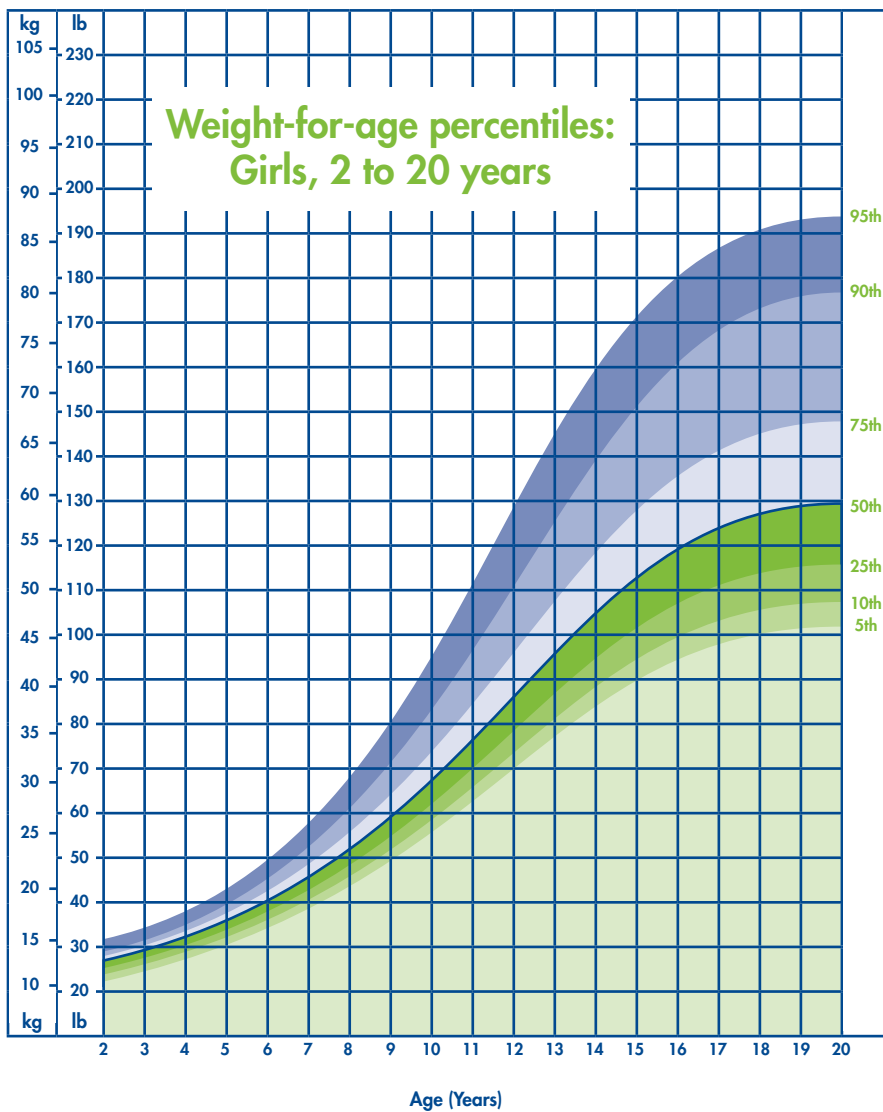
You may have heard your pediatrician refer to your child's weight in terms of a percentile. To measure growth in your child based on their weight, doctors most commonly use weight-for-age percentiles. Weight-for-age percentiles are used to measure your child's weight based strictly on age. It does not take into account the height of a child. **This is not a method to determine obesity (or overweight) in children, but simply an indicator of growth as compared to children of the same age.**



Once you have found your child's weight-for-age percentile, you can then determine what percentile (or percentile range) they fall into, as compared to children of the same age.

For example, if your child is in the 95th percentile, this means that their weight is greater than 95 percent of children of the same age.

To plot your child's weight-for-age percentile, find the age of your child on the bottom of the chart and look to the left to locate their body weight. Once you locate their weight and age, plot the point on the graph using a pen or pencil. Once you have plotted the measurement, locate the corresponding shaded color on the bottom of the chart to determine your child's weight-for-age percentile.



Once you have found your child's weight-for-age percentile, you can then determine what percentile (or percentile range) they fall into, as compared to children of the same age.

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# About Body Mass Index (BMI)

BMI is the most common method to measure adult obesity. However, BMI is now becoming a popular tool used to measure obesity in children. BMI is a number calculated by dividing a person's weight in kilograms by his or her height in meters squared.

## Weight in Pounds

	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
2'0" (24 inches)	24	37	48																
2'1" (25 inches)	22	34	45	56															
2'2" (26 inches)	21	31	42	52															
2'3" (27 inches)	19	29	39	48	58														
2'4" (28 inches)	18	27	36	45	54														
2'5" (29 inches)	17	25	33	42	50	59													
2'6" (30 inches)	16	23	31	39	47	55													
2'7" (31 inches)	15	22	29	37	44	51	59												
2'8" (32 inches)	14	21	27	34	41	48	55												
2'9" (33 inches)	13	19	26	32	39	45	52	58											
2'10" (34 inches)	12	18	24	30	36	43	49	55											
2'11" (35 inches)	11	17	23	29	34	40	46	52	57										
3'0" (36 inches)	11	16	22	27	33	38	43	49	54										
3'1" (37 inches)	10	15	21	26	31	36	41	46	51	56									
3'2" (38 inches)	10	15	19	24	29	34	39	44	49	54	58								
3'3" (39 inches)		14	18	23	28	32	37	41	46	51	55								
3'4" (40 inches)		13	18	22	26	31	35	40	44	48	53	57							
3'5" (41 inches)		13	17	21	25	29	33	38	42	46	50	54	59						
3'6" (42 inches)		12	16	20	24	28	32	36	40	44	48	52	56						
3'7" (43 inches)		11	15	19	23	27	30	34	38	42	46	49	53	57					
3'8" (44 inches)		11	15	18	22	25	29	33	36	40	44	47	51	54	58				
3'9" (45 inches)		10	14	17	21	24	28	31	35	38	42	45	49	52	56	59			
3'10" (46 inches)		10	13	17	20	23	27	30	33	37	40	43	47	50	53	56			
3'11" (47 inches)		10	13	16	19	22	25	29	32	35	38	41	45	48	51	54	57		
4'0" (48 inches)			12	15	18	21	24	27	31	34	37	40	43	46	49	52	55	58	
4'1" (49 inches)			12	15	18	20	23	26	29	32	35	38	41	44	47	50	53	56	59
4'2" (50 inches)			11	14	17	20	22	25	28	31	34	37	39	42	45	48	51	53	56
4'3" (51 inches)			11	14	16	19	22	24	27	30	32	35	38	41	43	46	49	51	54
4'4" (52 inches)			10	13	16	18	21	23	26	29	31	34	36	39	42	44	47	49	52
4'5" (53 inches)			10	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50
4'6" (54 inches)			10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48
4'7" (55 inches)				12	14	16	19	21	23	26	28	30	33	35	37	40	42	44	46
4'8" (56 inches)				11	13	16	18	20	22	25	27	29	31	34	36	38	40	43	45
4'9" (57 inches)				11	13	15	17	19	22	24	26	28	30	32	35	37	39	41	43
4'10" (58 inches)				10	13	15	17	19	21	23	25	27	29	31	33	36	38	40	41
4'11" (59 inches)				10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
5'0" (60 inches)				10	12	14	16	18	19	21	23	25	27	29	31	33	35	37	39
5'1" (61 inches)					11	13	15	17	18	20	22	24	26	28	30	32	34	36	37
5'2" (62 inches)					11	13	15	16	18	20	22	23	25	27	29	31	33	34	37
5'3" (63 inches)					11	12	14	16	17	19	21	23	24	26	28	30	32	33	35
5'4" (64 inches)					10	12	14	15	17	18	20	22	24	25	27	29	31	32	34
5'5" (65 inches)					10	12	13	15	16	18	20	21	23	25	26	28	30	31	33
5'6" (66 inches)					10	11	13	15	16	17	19	21	22	24	25	27	29	30	32
5'7" (67 inches)						11	13	14	15	17	18	20	22	23	25	26	28	29	31
5'8" (68 inches)						11	12	14	15	16	18	19	21	22	24	25	27	28	30
5'9" (69 inches)						10	12	13	14	16	17	19	20	22	23	25	26	28	29
5'10" (70 inches)						10	11	13	14	15	17	18	20	21	23	24	25	27	28
5'11" (71 inches)						10	11	13	14	15	16	18	19	21	22	23	25	26	28
6'0" (72 inches)							11	12	13	14	16	17	19	20	21	23	24	25	27

If your child's BMI is not listed on this chart, please visit the OAC's Web site at [www.ObesityAction.org](http://www.ObesityAction.org) to calculate their BMI.

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# Treating Childhood Obesity

Treating obesity in children and adolescents differs from treatment in adults. Involving the family in a child's weight management program is a key element to treatment. Treatment of pediatric obesity is not accomplished by just dieting. You need to address multiple aspects of the child and the family's lifestyle, nutrition and physical activity patterns.

Prior to discussing any treatment plans, you first must determine the desired goals. If your child is overweight, or at risk for becoming overweight, it is important to work with your healthcare provider to develop an individualized plan of care that includes realistic goals and action steps.

As a support system, family is integral in ensuring weight management goals are met. You must first assess the readiness of the child and the family to make changes. If the child is depressed, this needs to be addressed prior to working on the child's weight problem. If a depressed child attempts weight-loss and is unsuccessful, this may worsen their depression or lower their self-esteem.

Similarly, if there is a lot of stress in the family at that time it is not ideal to try and tackle yet another major issue. In some situations where there is significant depression or stress, it may be most appropriate for the child and the family to seek counseling to address these issues. In addition, if parents express little concern regarding their child being overweight, they are not ready to make the necessary changes.

It is important to talk with your physician about options for treating childhood obesity. The various treatments of obesity in children and adolescents include:

- Dietary therapy
- Physical activity
- Behavior modification

## Dietary Therapy

When treating a child affected by obesity, it is often recommended that they have a consultation with a dietitian that specializes in children's needs. Dietitians can best help children understand healthy eating habits and how to implement them in their long-term diet.

Dietitians do not always recommend restricting caloric intake for children. Education on how to read food labels, cut back on portions, understand the food pyramid and eat smaller bites at a slower pace is generally the information given to change a child's eating habits.



## Physical Activity

Another form of obesity treatment in children is increasing physical activity. Physical activity is an important long-term ingredient for children, as studies indicate that inactivity in childhood has been linked to a sedentary adult lifestyle.

Increasing physical activity can decrease, or at least slow the increase, in fatty tissues in children affected by obesity. The U.S. Surgeon General recommends that children get at least 60 minutes of physical activity each day. Individualized programs are available and possible for those children or adolescents that are not able to meet minimum expectations.



## Behavior Modification

Lifestyles and behaviors are established at a young age. It is important for parents and children to remain educated and focused on making long-term healthy lifestyle choices.

There are several ways that children and adolescents can modify their behavior for healthier outcomes, such as:

- Changing eating habits
- Increasing physical activity
- Becoming educated about the body and how to nourish it appropriately
- Engaging in a support group or extracurricular activity
- Setting realistic weight management goals

## What can you do to learn more about childhood obesity?

The Obesity Action Coalition (OAC), a more than 75,000 member-strong National non-profit organization, is dedicated to improving the lives of individuals affected by the disease of obesity through education, advocacy and support. The OAC offers many valuable resources to those affected by childhood obesity and their family members. To learn more about childhood obesity, please visit the "Childhood Obesity" section on the OAC Web site at [www.ObesityAction.org](http://www.ObesityAction.org). For more information, please contact the OAC at (800) 717-3117 or [info@obesityaction.org](mailto:info@obesityaction.org).

## Notes:

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# ABOUT THE **OBESITY ACTION COALITION (OAC)**

The Obesity Action Coalition (OAC) is a National non-profit organization dedicated to giving a voice to individuals affected by obesity and helping them along their journey toward better health. Our core focuses are to elevate the conversation of weight and its impact on health, improve access to obesity care, provide science-based education on obesity and its treatments, and fight to eliminate weight bias and discrimination.



**PUBLIC  
EDUCATION**



**ADVOCACY**



**ANNUAL  
CONVENTION**



**NATIONAL  
AWARENESS  
CAMPAIGNS**



**VIBRANT  
COMMUNITY**



## **LEARN, CONNECT, ENGAGE**

The OAC knows that the journey with weight can be challenging but we also know that great things happen when we learn, connect and engage. That is why the OAC Community exists. Our Community is designed to provide quality education, ongoing support programs, an opportunity to connect, and a place to take action on important issues.

**Through the OAC Community,  
you can get access to:**

- Weight & Health Education • Community Blogs
- Community Discussion Forum
- Ongoing Support • Meaningful Connections
- AND MUCH MORE**

**JOIN TODAY: GO TO [OBESITYACTION.ORG/JOIN](https://obesityaction.org/join)**

[info@obesityaction.org](mailto:info@obesityaction.org)

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