

**At Risk of Becoming Overweight (Infants and Children)**

**Definition/  
cut-off value**

Have one or more risk factors for being at-risk of becoming overweight. The risk factors are limited to:

- Being  $\geq 24$  months of age and  $\geq 85^{\text{th}}$  and  $< 95^{\text{th}}$  percentile Body Mass Index (BMI)\* or  $\geq 85^{\text{th}}$  and  $< 95^{\text{th}}$  percentile weight-for-stature\* (i.e., standing height)
- Being  $< 12$  months of age and born to a woman who was obese (BMI  $\geq 30$ ) at the time of conception or at any point in the first trimester of the pregnancy (BMI must be based on self reported, by the mother, prepregnancy weight and height or on a measured weight and height documented by staff or other health care provider.)
- Being  $\geq 12$  months of age and having a biological mother who is obese (BMI  $\geq 30$ ) at the time of certification (BMI must be based on self reported, by the mother, weight and height or on weight and height measurements taken by staff at the time of certification. If the mother is pregnant or has had a baby within the past 6 months, use her prepregnancy weight to assess for obesity since her current weight will be influenced by pregnancy related weight gain.)
- Being an infant or child and having a biological father who is obese (BMI  $\geq 30$ ) at the time of certification (BMI must be based on self reported, *by the father*, weight and height or on weight and height measurements taken by staff at the time of certification.)

\* Based on National Center for Health Statistics/Centers for Disease Control and Prevention (2000) age/sex specific growth charts.

Note: The first bullet in this definition cannot be used for children 24-36 months with a recumbent length measurement, since only standing measurements may be used to plot on BMI and WFS growth charts

**Participant category and priority level**

Category	Priority
Infants	I
Children	III

**Justification**

The rise in the prevalence of overweight in children and adolescents in the United States is one of the most important public health issues we face today. National surveys from the mid-1960s to the early 1990s document a significant increase in overweight among children from preschool age through adolescence. These trends parallel a concurrent increase in obesity among adults, suggesting that fundamental shifts are occurring in dietary and/or physical activity behaviors that are having an adverse effect on overall energy balance.

**Justification (cont)**

Specific reasons for the rapid rise in obesity in the United States are not well understood. Important contributors include a large and growing abundance of calorically dense foods and an increased sedentary lifestyle for all ages. Evidence from recent scientific studies has shown that obesity tends to run in families, suggesting a genetic predisposition. However, a genetic predisposition does not inevitably result in the development of obesity. Environmental, social and other factors mediate the relationship.

In any individual, and in the same individual at different times of life, the relative influence of genetics, environment, and development may vary. In other words, individuals with an otherwise genetic predisposition to obesity still may be lean in an environment of food scarcity or high demand for physical activity; while individuals not genetically predisposed may become obese in an environment that encourages over-consumption (especially of calorically dense foods) and includes few inducements to physical activity.

Children 2 years of age or older with a BMI at the 85<sup>th</sup>-94<sup>th</sup> percentile are at risk of overweight while those with a BMI at or above the 95<sup>th</sup> percentile are overweight. Adults with a BMI greater than or equal to 30 are obese while those with a BMI at or greater than 40 are classified as extremely obese.

Increasingly, attention is being focused on the need for comprehensive strategies that focus on preventing overweight/obesity and a sedentary lifestyle for all ages. Scientific evidence suggests that the presence of obesity in a parent greatly increases the risk of overweight in preschoolers, even when no other overt signs of increasing body mass are present. The table included in attachment 114-A may be used to assist staff in assessing parental obesity.

The WIC Program has the opportunity to become an important player in public health efforts to curb the increasing spread of obesity by actively identifying and enrolling infants and children who may be at-risk of becoming overweight in childhood or adolescence, and assisting them and their families in making dietary and lifestyle changes necessary to reduce their risks. The issue of a child being at risk of overweight may cause some families to feel embarrassed; therefore, it is extremely important for WIC staff to treat these families with sensitivity and compassion. Appropriate nutrition education emphasizing the importance of prevention (addressing both feeding/eating behaviors and physical activity), food choices within food prescriptions, and appropriate referrals provided through WIC would benefit not only at-risk infants and children, but also their families.

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**Clarification**

The risk of overweight in preschoolers is greatly increased when either parent is obese. Because of the sensitivity of this topic and the potential barrier it might create, the use of the risk code definitions specific to parental obesity will not be required, unless there is no other risk criteria that will qualify the child for the WIC Program. If no other risk criteria exist at certification, the

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**Clarification (cont)** regression code may be used, if applicable, before applying any of the definitions related to parental obesity to certify the child. Note: If the child is 24 months or older and plots at or above the 85<sup>th</sup> and less than the 95<sup>th</sup> percentile Body Mass Index, this risk code shall be used to identify children at risk of becoming overweight.

For this criterion, the definition of parental obesity (BMI  $\geq 30$ ) applies to all parents, regardless of age (teen and adult). Although there are recommended obesity BMI cut-points specific for sex and age for 2 – 19 years old (see reference #3), there is only a slight difference between these cut-points and the ones used to define obesity for an individual over 18 years of age. Based on the slight differences in cut-points and lack of research suggesting otherwise, RISC elected to use a single definition of parental obesity for ease in applying this criterion.

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**References**

1. Barlow, Sarah E. and William H. Dietz. Obesity Evaluation and Treatment: Expert Committee Recommendations. Pediatrics Vol. 102 No. 3, September 1998.
  2. Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. National, Heart, Lung, and Blood Institute, National Institutes of Health. NIH Publication No. 98-4083 [http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_home.html](http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.html)
  3. Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. Establishing a standard definition for child overweight and obesity worldwide: international survey. BMJ. 2000;320:1-6.
  4. Kuczmarski RJ, Ogden CL, Grummer-Strawn LM, et al. CDC growth charts: United States. Advance data from vital and health statistics; no. 314. Hyattsville, Maryland: National Center for Health Statistics. 2000.
  5. Mokdad, AH, Marks JS, Strain D, Flegal KM, Dietz WH. The Spread of the Obesity Epidemic in the United States, 1991-1998. JAMA. October 27, 1999. pgs 1519-1522.
  6. Report from Robert C. Whitaker, MD, MPH. Associate Professor of Pediatrics, University of Cincinnati College of Medicine to RISD. October 1999.
  7. Silverman, Bernard L. et al. Long Term Effects of the Intrauterine Environment. The Northwestern University Diabetes in Pregnancy Center. Diabetes Care, Volume 21, Supplement 2, August 1998. pgs B142-B148.
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**References**

8. The Causes and Health Consequences of Obesity in Children and Adolescents. Supplement to pediatrics. American Academy of Pediatrics. March 1998. Volume 101, Number 3, part 2 of 2.
9. Whitaker, Robert C., JA Wright, MS Pepe, KD Seidel, WH Dietz. Predicting Obesity in Young Adulthood from Childhood and Parental Obesity. NEJM, Vol 337, No 13, September 25, 1997. pgs 869-873.

**Abbreviated Body Mass Index (BMI) Table\***

<b>Height</b>	<b>Inches</b>	<b>Weight/Height equal to BMI 30</b>
<b>4' 10"</b>	<b>58</b>	<b>143</b>
<b>4' 11"</b>	<b>59</b>	<b>148</b>
<b>5' 0"</b>	<b>60</b>	<b>153</b>
<b>5' 1"</b>	<b>61</b>	<b>158</b>
<b>5' 2"</b>	<b>62</b>	<b>164</b>
<b>5' 3"</b>	<b>63</b>	<b>169</b>
<b>5' 4"</b>	<b>64</b>	<b>174</b>
<b>5' 5"</b>	<b>65</b>	<b>180</b>
<b>5' 6"</b>	<b>66</b>	<b>186</b>
<b>5' 7"</b>	<b>67</b>	<b>191</b>
<b>5' 8"</b>	<b>68</b>	<b>197</b>
<b>5' 9"</b>	<b>69</b>	<b>203</b>
<b>5' 10"</b>	<b>70</b>	<b>209</b>
<b>5' 11"</b>	<b>71</b>	<b>215</b>
<b>6' 00"</b>	<b>72</b>	<b>221</b>
<b>6' 1"</b>	<b>73</b>	<b>227</b>
<b>6' 2"</b>	<b>74</b>	<b>233</b>
<b>6' 3"</b>	<b>75</b>	<b>240</b>

Source: Evidence Report of Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults, 1998. National Institutes of Health/National Heart, Lung, and Blood Institute (NHLBI). Note: A complete BMI table is available on the NHLBI website: [www.nhlbi.gov/guidelines/obesity/ob\\_hime.htm](http://www.nhlbi.gov/guidelines/obesity/ob_hime.htm)

\* This table may be used to determine parental (male or female) obesity (BMI  $\geq$ 30).