The prevalence of obesity and overweight status† in children ages two up to five years continue to decline in the Minnesota WIC program. Although overall rates are decreasing, there are significant health disparities among race/ethnic groups.¹

The WIC Program serves children up to age five living in lower income households. In Minnesota one out of three children ages two up to five years are served by WIC.¹,² WIC serves populations that are at higher risk for obesity than the general population.

Childhood obesity has both immediate and long lasting effects on the child. Obese children are more likely to have asthma, joint problems, high blood pressure, heartburn, obstructive sleep apnea, high cholesterol, and psychological stress.³

Obese or overweight children are more likely to become overweight adults. Obesity in adults is associated with many chronic health conditions including cardiovascular disease, diabetes and certain cancers. Adults who were obese as children have more severe chronic disease risk factors.³

Weight Status in Minnesota WIC Children

- Obesity in Minnesota WIC children increased from 8.5% in 1990 to a peak of 13.8% in 2004, thereafter decreasing to 12.6% in 2014. Similarly, overweight decreased from 16.9% in 2004 to 14.9 % in 2014 (Figure 1).¹

- In 2014, 17,223 (27.5%) of the 62,749 Minnesota WIC children 2 up to 5 years were obese or overweight¹ compared to 22.8% of the general population in the same age group.⁴

- The estimated lifetime direct medical cost of childhood obesity is $19,000 per child⁵. For every tenth percent decrease in the Minnesota obesity rate (800 children), 15 million could be saved in medical costs.

†Obesity is a BMI (weight/height²) at the 95th percentile or greater. Overweight is a BMI at or above the 85th but less than the 95th percentile for age in children ages 2 to 5 years. Very obese is a BMI at the 97.5th percentile or greater.
Obesity by Race and Ethnicity in Minnesota WIC Children

Figure 2. Obesity in MN WIC Children
Ages 2 up to 5 years by Race/Ethnicity

NH = Non-Hispanic  Child race/ethnicity was self-identified by WIC parents.  Black/African-American includes children of African immigrant mothers.

- Minnesota WIC child obesity rates have declined since 2006 in most race/ethnicity groups (Figure 2).  
- In 2014, the obesity rate for White Non-Hispanic (NH) children of 9.7% (Figure 2) approached the Healthy People 2020 objective of 9.6%.  
- Obesity rates were highest in American Indian NH children. These rates have risen since 2006 with a peak of 30.2% in 2013. Data in 2014 show the first indication that rates are/may be declining (Figure 2).  

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian NH</td>
<td>25.0%</td>
<td>27.0%</td>
<td>26.5%</td>
<td>27.7%</td>
<td>28.2%</td>
<td>29.1%</td>
<td>28.9%</td>
<td>30.2%</td>
<td>28.7%</td>
</tr>
<tr>
<td>Asian NH</td>
<td>15.5%</td>
<td>15.6%</td>
<td>16.8%</td>
<td>15.8%</td>
<td>15.1%</td>
<td>14.7%</td>
<td>15.3%</td>
<td>15.6%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Black/African American NH</td>
<td>13.0%</td>
<td>13.2%</td>
<td>13.0%</td>
<td>12.0%</td>
<td>11.9%</td>
<td>11.6%</td>
<td>11.3%</td>
<td>11.4%</td>
<td>10.9%</td>
</tr>
<tr>
<td>White NH</td>
<td>9.8%</td>
<td>9.8%</td>
<td>9.9%</td>
<td>10.0%</td>
<td>9.6%</td>
<td>9.7%</td>
<td>9.8%</td>
<td>10.2%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Multiple Races NH</td>
<td>12.8%</td>
<td>13.0%</td>
<td>12.6%</td>
<td>13.1%</td>
<td>13.0%</td>
<td>13.7%</td>
<td>13.4%</td>
<td>13.4%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>17.7%</td>
<td>18.3%</td>
<td>18.3%</td>
<td>17.7%</td>
<td>16.8%</td>
<td>16.4%</td>
<td>16.3%</td>
<td>16.6%</td>
<td>16.4%</td>
</tr>
</tbody>
</table>
• The prevalence of obesity decreased from 2006 to 2014 in children ages two to three years, from 11.3% to 10.0% (Figure 3).  

• Obesity increases with child age (Figure 3).  

• Children ages four to five years have an obesity rate 1.5 times the Healthy People 2020 goal (15.6 compared to 9.6).  

• Overweight or obesity at ages two or three years is predictive of obesity at ages four to five years regardless of race or ethnicity.  

• Obese and very obese weight status varies by race/ethnicity, with over 25% of the American Indian NH children being very obese at age four, nearly 2.5 times that of all Minnesota WIC four year olds combined during 2014 (Figure 4).  

• High birth weight >4000g is predictive of very obese weight status at ages four up to five years for all race/ethnic groups.  

• Breastfeeding duration beyond 26 weeks is protective against very obese weight status for White NH, American Indian NH and Hispanic groups.  

References  

1. Minnesota WIC Information System  


