Bending the Obesity Cost Curve in Alabama:

Reducing the Average Body Mass Index in the State by 5 Percent Could Lead to Health Care Savings of More than $3 Billion in 10 Years and $9 Billion in 20 Years

The number of obese adults has grown dramatically in Alabama over the past 15 years, and is expected to grow significantly in the next 20 years.

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Body mass index (BMI) is a calculation based on an individual’s weight and height:

\[
BMI = \left( \frac{\text{Weight in pounds}}{(\text{Height in inches}) \times (\text{Height in inches})} \right) \times 703
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Obesity is defined as an excessively high amount of fatty tissue in relation to lean tissue. An adult is considered to be obese if his or her BMI is 30 or above.

Projections for Annual Obesity-Related Health Spending in Alabama, 2010-2030

*In millions of dollars
## Obesity-Related Health Care Costs in Alabama

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$3,381,000,000</td>
<td>$9,481,000,000</td>
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## Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th>Type 2 Diabetes</th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>448,912</td>
<td>72,185</td>
<td>$1,152,000,000</td>
<td>141,297</td>
<td>$3,672,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>79,581</td>
<td>4,947</td>
<td>$95,000,000</td>
<td>9,846</td>
<td>$213,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>311,842</td>
<td>59,122</td>
<td>$1,627,000,000</td>
<td>121,749</td>
<td>$4,235,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,006,222</td>
<td>60,370</td>
<td>$214,000,000</td>
<td>102,683</td>
<td>$570,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>988,452</td>
<td>31,890</td>
<td>$295,000,000</td>
<td>59,554</td>
<td>$791,000,000</td>
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<td>15.7%</td>
<td>32.0%</td>
<td>62.6%</td>
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## Peer-Reviewed Projections of Future Trends

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The NHF study found the number of obese Americans could grow from 32 percent now to around 50 percent (+/- 5 percent) in 2030.

Based on the predicted rise in obesity, researchers found the baseline potential growth in related costs could be $66 billion (+/- 45 billion). Within the potential range, it could be as low as $21 billion or as high as $111 billion.

In addition, due to expected increases in obesity, the projected baseline estimates for:³

- The number of new cases of diabetes could be 7.9 million (+/- 1.6 million) per year, which means it could be as low as 6.3 million or as high as 9.5 million;
- The number of new cases of chronic heart disease and stroke could be 6.8 million (+/- 1.5 million) per year, which means it could be as low as 5.3 million or as high as 8.3 million; and
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**Effective Ways to Reduce Obesity**

According to the U.S. Centers for Disease Control and Prevention (CDC), more than half of all Americans live with a preventable chronic disease, and many such diseases are related to obesity, poor nutrition and physical inactivity.⁴

A wide range of studies have found that effective disease-prevention programs in communities can improve nutrition, increase physical activity and reduce obesity rates.

- CDC’s Community Preventive Services Taskforce conducts a systematic review and evaluation process to determine effective programs and policies for improving health and preventing disease. The results, published in the *Community Guide for Preventive Services*, feature a series of evidence-based, community approaches to increasing physical activity, promoting good nutrition, lowering diabetes rates and reducing obesity. The approaches include improving the built environment by building sidewalks and increasing access to parks; starting workplace wellness programs; and increasing physical activity in schools.⁵
The Compendium of Proven Community-Based Prevention Programs by The New York Academy of Medicine (NYAM) includes a summary and examples from an extensive literature review that NYAM conducted of peer-reviewed studies evaluating the effectiveness of community-based disease-prevention programs. NYAM identified 84 articles, including programs that can directly reduce obesity and obesity-related diseases.

In 2011, the American Heart Association (AHA) published a review of more than 200 studies and concluded that most cardiovascular disease can be prevented or at least delayed until old age through a combination of direct medical care and community-based prevention programs and policies. Some of the key findings included:

- Every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses.
- For every $1 spent in wellness programs, companies could save $3.27 in medical costs and $2.73 in absenteeism costs.
- Some interventions have been shown to help improve nutrition and activity habits in just one year and had a return of $1.17 for every $1 spent.
- Participants in community-based programs who focused on improving nutrition and increasing physical activity had a 58 percent reduction in incidence of type 2 diabetes compared with drug therapy, which had a 31 percent reduction.
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Projections for Annual Obesity-Related Health Spending in Alaska, 2010-2030

![Graph showing projected obesity-related health spending in Alaska from 2010 to 2030. The graph compares total predicted costs with and without a 5% BMI reduction.]
Obesity-Related Health Care Costs in Alaska

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>$573,000,000.00</td>
<td>$1,530,000,000</td>
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Potential Health and Cost Savings by Top Obesity-Related Health Problems

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</thead>
<tbody>
<tr>
<td></td>
<td>50,843</td>
<td>7,892</td>
<td>$176,000,000</td>
<td>14,389</td>
<td>$546,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>7,892</td>
<td>434</td>
<td>$26,000,000</td>
<td>809</td>
<td>$51,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>29,747</td>
<td>6,273</td>
<td>$281,000,000</td>
<td>11,889</td>
<td>$692,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>113,936</td>
<td>6,562</td>
<td>$36,000,000</td>
<td>10,826</td>
<td>$94,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>117,391</td>
<td>3,845</td>
<td>$55,000,000</td>
<td>6,895</td>
<td>$151,000,000</td>
</tr>
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<th>Obesity Rate in 1995</th>
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<tr>
<td>15.7%</td>
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**Projections for Annual Obesity-Related Health Spending in Arizona, 2010-2030**

*In millions of dollars*
Obesity-Related Health Care Costs in Arizona

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</tr>
</thead>
<tbody>
<tr>
<td>$4,775,000,000</td>
<td>$13,642,000,000</td>
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Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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*In millions of dollars*
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<td>41,337</td>
<td>$722,000,000</td>
<td>80,530</td>
<td>$2,324,000,000</td>
<td></td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>47,390</td>
<td>2,732</td>
<td>$76,000,000</td>
<td>5,347</td>
<td>$145,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>187,061</td>
<td>32,935</td>
<td>$1,027,000,000</td>
<td>67,867</td>
<td>$2,642,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>606,605</td>
<td>34,933</td>
<td>$148,000,000</td>
<td>60,434</td>
<td>$391,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>598,760</td>
<td>19,067</td>
<td>$193,000,000</td>
<td>36,343</td>
<td>$561,000,000</td>
</tr>
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<th>Obesity Rate in 2011</th>
<th>Projected Obesity Rate in 2030 based on current trajectory*</th>
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<tbody>
<tr>
<td>17.0%</td>
<td>30.9%</td>
<td>60.6%</td>
<td>53.4%</td>
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- Every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses.
- For every $1 spent in wellness programs, companies could save $3.27 in medical costs and $2.73 in absenteeism costs.
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Bending the Obesity Cost Curve in California:

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### Projections for Annual Obesity-Related Health Spending in California, 2010-2030

*In millions of dollars*
Obesity-Related Health Care Costs in California

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<thead>
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<tr>
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<tr>
<td>Type 2 Diabetes</td>
<td>2,694,595</td>
<td>420,642</td>
<td>$9,747,000,000</td>
<td>796,430</td>
<td>$31,087,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>505,825</td>
<td>29,023</td>
<td>$689,000,000</td>
<td>52,769</td>
<td>$1,766,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>1,876,680</td>
<td>321,512</td>
<td>$13,923,000,000</td>
<td>656,970</td>
<td>$35,571,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>6,478,109</td>
<td>364,104</td>
<td>$1,773,000,000</td>
<td>698,431</td>
<td>$5,422,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>6,631,138</td>
<td>209,567</td>
<td>$2,758,000,000</td>
<td>387,850</td>
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*In millions of dollars*
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<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>$3,792,000,000</td>
<td>$10,794,000,000</td>
</tr>
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<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<tr>
<td>Type 2 Diabetes</td>
<td>333,206</td>
<td>54,596</td>
<td>$1,247,000,000</td>
<td>108,067</td>
<td>$4,043,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>64,932</td>
<td>3,684</td>
<td>$160,000,000</td>
<td>7,624</td>
<td>$313,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>231,944</td>
<td>45,232</td>
<td>$1,761,000,000</td>
<td>95,428</td>
<td>$4,735,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>847,137</td>
<td>55,978</td>
<td>$274,000,000</td>
<td>97,935</td>
<td>$759,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>875,842</td>
<td>29,984</td>
<td>$347,000,000</td>
<td>52,652</td>
<td>$949,000,000</td>
</tr>
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*In millions of dollars*
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### Projections for Annual Obesity-Related Health Spending in Delaware, 2010-2030

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Predicted Costs</th>
<th>Total Predicted Costs with 5% BMI Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$1,450</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>$1,500</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>$1,550</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>$1,600</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>$1,650</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>$1,700</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>$1,750</td>
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<tr>
<td>2024</td>
<td>$1,800</td>
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<tr>
<td>2026</td>
<td>$1,850</td>
<td></td>
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<tr>
<td>2028</td>
<td>$1,900</td>
<td></td>
</tr>
<tr>
<td>2030</td>
<td>$1,950</td>
<td></td>
</tr>
</tbody>
</table>

*In millions of dollars*
## Obesity-Related Health Care Costs in Delaware

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$701,000,000</td>
<td>$1,912,000,000</td>
</tr>
</tbody>
</table>

## Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>79,275</td>
<td>13,017</td>
<td>$228,000,000</td>
<td>25,427</td>
<td>$721,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>14,714</td>
<td>1,125</td>
<td>$23,000,000</td>
<td>1,923</td>
<td>$47,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>57,340</td>
<td>10,786</td>
<td>$344,000,000</td>
<td>22,261</td>
<td>$871,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>187,986</td>
<td>11,575</td>
<td>$47,000,000</td>
<td>18,887</td>
<td>$119,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>184,829</td>
<td>5,633</td>
<td>$54,000,000</td>
<td>10,341</td>
<td>$143,000,000</td>
</tr>
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* 2010 baseline for potential cases, costs and savings
* National Heart Forum provided the total cases and cases avoided per 100,000 people, and TFAH used the state’s 2011 census data to translate to the full population-based estimates.
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<tr>
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<th>Obesity Rate in 2011</th>
<th>Projected Obesity Rate in 2030 based on current trajectory*</th>
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<td>15.2%</td>
<td>28.8%</td>
<td>64.7%</td>
<td>56.4%</td>
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* All ages, all genders, NHF adjusted for self-reporting bias.

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The analysis is based on a model developed by researchers at the National Heart Forum (NHF). Micro Health Simulations used the model in a peer-reviewed study, “Health and Economic Burden of the Projected Obesity Trends in the USA and UK,” published in 2011 in *The Lancet*. The full methodology is available in Appendix C of the 2012 *F as in Fat* report (available at [www.healthyamericans.org](http://www.healthyamericans.org)).
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The NHF study published in *The Lancet* in 2011 developed national projections for adult obesity in the United States and the potential growth in related disease rates and costs between 2010 and 2030, using data from the National Health and Nutrition Examination Survey (NHANES).

The NHF study found the number of obese Americans could grow from 32 percent now to around 50 percent (+/- 5 percent) in 2030.

Based on the predicted rise in obesity, researchers found the baseline potential growth in related costs could be $66 billion (+/- 45 billion). Within the potential range, it could be as low as $21 billion or as high as $111 billion.

In addition, due to expected increases in obesity, the projected baseline estimates for:
- The number of new cases of diabetes could be 7.9 million (+/- 1.6 million) per year, which means it could be as low as 6.3 million or as high as 9.5 million;
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  o Some interventions have been shown to help improve nutrition and activity habits in just one year and had a return of $1.17 for every $1 spent.
  
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Bending the Obesity Cost Curve in District of Columbia:

Reducing the Average Body Mass Index in Washington, D.C. by 5 Percent Could Lead to Health Care Savings of More than $360 Million in 10 Years and $1 Billion in 20 Years

The number of obese adults has grown dramatically in District of Columbia over the past 15 years, and is expected to grow significantly in the next 20 years.

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A new analysis commissioned by the Trust for America’s Health (TFAH) and the Robert Wood Johnson Foundation (RWJF) and conducted by the National Heart Forum (NHF) found that if District of Columbia could reduce the average body mass index (BMI) of its residents by only 5 percent, D.C. could help prevent thousands of cases of type 2 diabetes, coronary heart disease and stroke, hypertension, cancer and arthritis, while saving millions of dollars. For a six-foot-tall person weighing 200 pounds, a 5 percent reduction in BMI would be the equivalent of losing roughly 10 pounds.\textsuperscript{65}

\textbf{Body mass index} (BMI) is a calculation based on an individual’s weight and height:

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*In millions of dollars
Obesity-Related Health Care Costs in District of Columbia

<table>
<thead>
<tr>
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<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$364,000,000</td>
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Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
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<tr>
<td>Type 2 Diabetes</td>
<td>40,312</td>
<td>6,155</td>
<td>$133,000,000</td>
<td>11,705</td>
<td>$433,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>8,417</td>
<td>371</td>
<td>$6,000,000</td>
<td>667</td>
<td>$7,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>29,219</td>
<td>4,721</td>
<td>$165,000,000</td>
<td>9,295</td>
<td>$406,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>98,237</td>
<td>5,296</td>
<td>$26,000,000</td>
<td>9,665</td>
<td>$72,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>103,440</td>
<td>3,424</td>
<td>$38,000,000</td>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>$31,500</td>
</tr>
<tr>
<td>$32,000</td>
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<td>$33,000</td>
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<tr>
<td>$36,000</td>
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*In millions of dollars*
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<td>1,412,354</td>
<td>234,408</td>
<td>$5,913,000,000</td>
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<td>$14,684,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>4,372,562</td>
<td>235,932</td>
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*In millions of dollars*
Obesity-Related Health Care Costs in Georgia

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<tr>
<td></td>
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<td>123,475</td>
<td>$2,563,000,000</td>
<td>238,019</td>
<td>$8,324,000,000</td>
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<td>Obesity-Related Cancers*</td>
<td>126,027</td>
<td>6,380</td>
<td>$382,000,000</td>
<td>12,073</td>
<td>$812,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>465,535</td>
<td>87,846</td>
<td>$3,735,000,000</td>
<td>185,409</td>
<td>$9,928,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,649,642</td>
<td>106,004</td>
<td>$535,000,000</td>
<td>184,624</td>
<td>$1,492,000,000</td>
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<tr>
<td>Arthritis</td>
<td>1,707,454</td>
<td>58,793</td>
<td>$752,000,000</td>
<td>108,753</td>
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<tr>
<td></td>
<td>105,063</td>
<td>15,879</td>
<td>$319,000,000</td>
<td>31,634</td>
<td>$1,051,000,000</td>
</tr>
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<td>Obesity-Related Cancers*</td>
<td>21,062</td>
<td>1,210</td>
<td>$27,000,000</td>
<td>2,323</td>
<td>$74,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>78,240</td>
<td>13,363</td>
<td>$482,000,000</td>
<td>26,286</td>
<td>$1,153,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>264,816</td>
<td>14,587</td>
<td>$64,000,000</td>
<td>26,740</td>
<td>$184,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>265,338</td>
<td>8,084</td>
<td>$84,000,000</td>
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<td>15,232</td>
<td>$585,000,000</td>
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\text{BMI} = \left( \frac{\text{Weight in pounds}}{(\text{Height in inches}) \times (\text{Height in inches})} \right) \times 703
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**Obesity** is defined as an excessively high amount of fatty tissue in relation to lean tissue. An adult is considered to be obese if his or her BMI is 30 or above.

### Projections for Annual Obesity-Related Health Spending in Illinois, 2010-2030

*In millions of dollars*
Obesity-Related Health Care Costs in Illinois

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<tbody>
<tr>
<td>$9,852,000,000</td>
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Potential Health and Cost Savings by Top Obesity-Related Health Problems

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<tr>
<td></td>
<td>1,014,097</td>
<td>167,300</td>
<td>$3,434,000,000</td>
<td>325,721</td>
<td>$11,141,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>189,693</td>
<td>11,325</td>
<td>$163,000,000</td>
<td>23,036</td>
<td>$353,000,000</td>
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<td>Coronary Heart Disease &amp; Stroke</td>
<td>719,649</td>
<td>129,207</td>
<td>$4,649,000,000</td>
<td>268,967</td>
<td>$12,073,000,000</td>
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<td>Hypertension</td>
<td>2,369,745</td>
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<td>$680,000,000</td>
<td>258,801</td>
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<td>Arthritis</td>
<td>2,387,762</td>
<td>78,116</td>
<td>$923,000,000</td>
<td>149,927</td>
<td>$2,730,000,000</td>
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In addition, due to expected increases in obesity, the projected baseline estimates for: 

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According to the U.S. Centers for Disease Control and Prevention (CDC), more than half of all Americans live with a preventable chronic disease, and many such diseases are related to obesity, poor nutrition and physical inactivity.

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  - Every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses.
  - For every $1 spent in wellness programs, companies could save $3.27 in medical costs and $2.73 in absenteeism costs.
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<td>89,021</td>
<td>$1,635,000,000</td>
<td>170,743</td>
<td>$5,160,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>99,188</td>
<td>6,387</td>
<td>$122,000,000</td>
<td>10,883</td>
<td>$256,000,000</td>
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<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>386,193</td>
<td>72,338</td>
<td>$2,499,000,000</td>
<td>140,700</td>
<td>$5,922,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,249,620</td>
<td>77,095</td>
<td>$334,000,000</td>
<td>128,579</td>
<td>$864,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>1,243,233</td>
<td>40,079</td>
<td>$430,000,000</td>
<td>74,684</td>
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*In millions of dollars*
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<td>40,851</td>
<td>$726,000,000</td>
<td>77,783</td>
<td>$2,287,000,000</td>
</tr>
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<td>51,477</td>
<td>3,460</td>
<td>$84,000,000</td>
<td>5,849</td>
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<td>206,491</td>
<td>33,808</td>
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*In millions of dollars*
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<td>31,727</td>
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<td>63,052</td>
<td>$2,560,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>558,427</td>
<td>34,943</td>
<td>$144,000,000</td>
<td>57,769</td>
<td>$379,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>555,211</td>
<td>17,199</td>
<td>$189,000,000</td>
<td>33,105</td>
<td>$515,000,000</td>
</tr>
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<thead>
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<th>Obesity Rate in 2011</th>
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<td>29.6%</td>
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  o Every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses.
  
  o For every $1 spent in wellness programs, companies could save $3.27 in medical costs and $2.73 in absenteeism costs.
  
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\[
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**Projections for Annual Obesity-Related Health Spending in Kentucky, 2010-2030**

*In millions of dollars*
**Obesity-Related Health Care Costs in Kentucky**

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
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<tbody>
<tr>
<td>$3,376,000,000</td>
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<tr>
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<tbody>
<tr>
<td></td>
<td>394,029</td>
<td>63,793</td>
<td>$1,104,000,000</td>
<td>124,701</td>
<td>$3,503,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>68,075</td>
<td>4,151</td>
<td>$118,000,000</td>
<td>8,651</td>
<td>$277,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>264,958</td>
<td>52,389</td>
<td>$1,656,000,000</td>
<td>107,355</td>
<td>$4,298,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>881,343</td>
<td>54,617</td>
<td>$219,000,000</td>
<td>93,198</td>
<td>$576,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>876,143</td>
<td>29,187</td>
<td>$286,000,000</td>
<td>53,350</td>
<td>$790,000,000</td>
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*In millions of dollars*
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</tr>
</thead>
<tbody>
<tr>
<td>$3,657,000,000</td>
<td>$9,839,000,000</td>
</tr>
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<tr>
<td></td>
<td>398,422</td>
<td>66,884</td>
<td>$1,212,000,000</td>
<td>127,455</td>
<td>$3,882,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>69,400</td>
<td>3,934</td>
<td>$156,000,000</td>
<td>7,640</td>
<td>$302,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>274,399</td>
<td>50,964</td>
<td>$1,723,000,000</td>
<td>99,640</td>
<td>$4,120,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>882,898</td>
<td>55,539</td>
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<td>$344,000,000</td>
<td>40,550</td>
<td>$1,114,000,000</td>
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<th>1,886</th>
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<th>3,679</th>
<th>$53,000,000</th>
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<td>91,512</td>
<td>17,970</td>
<td>$491,000,000</td>
<td>38,398</td>
<td>$1,265,000,000</td>
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<td>Hypertension</td>
<td>296,784</td>
<td>19,113</td>
<td>$73,000,000</td>
<td>33,364</td>
<td>$196,000,000</td>
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<td>290,329</td>
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**Projections for Annual Obesity-Related Health Spending in Maryland, 2010-2030**

*In millions of dollars*
Obesity-Related Health Care Costs in Maryland

<table>
<thead>
<tr>
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<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4,935,000,000</td>
<td>$13,836,000,000</td>
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Potential Health and Cost Savings by Top Obesity-Related Health Problems

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<tr>
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<tbody>
<tr>
<td></td>
<td>469,294</td>
<td>79,731</td>
<td>$1,580,000,000</td>
<td>158,413</td>
<td>$5,211,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>86,375</td>
<td>5,537</td>
<td>$156,000,000</td>
<td>10,841</td>
<td>$339,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>320,731</td>
<td>63,295</td>
<td>$2,408,000,000</td>
<td>129,330</td>
<td>$6,099,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,083,304</td>
<td>71,397</td>
<td>$338,000,000</td>
<td>126,707</td>
<td>$930,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>1,098,166</td>
<td>37,884</td>
<td>$458,000,000</td>
<td>70,406</td>
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*In millions of dollars*
Obesity-Related Health Care Costs in Massachusetts

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<tr>
<td></td>
<td>483,855</td>
<td>77,206</td>
<td>$1,656,000,000</td>
<td>155,532</td>
<td>$5,436,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>102,436</td>
<td>6,851</td>
<td>$250,000,000</td>
<td>13,109</td>
<td>$489,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>375,028</td>
<td>65,085</td>
<td>$2,358,000,000</td>
<td>138,075</td>
<td>$5,918,000,000</td>
</tr>
<tr>
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<td>1,258,549</td>
<td>75,888</td>
<td>$340,000,000</td>
<td>135,308</td>
<td>$952,000,000</td>
</tr>
<tr>
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<td>1,270,472</td>
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<table>
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<tr>
<th>Year</th>
<th>Total Predicted Costs</th>
<th>Total Predicted Costs with 5% BMI Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$17,000</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>$18,000</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>$19,000</td>
<td></td>
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<td>2016</td>
<td>$20,000</td>
<td></td>
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<tr>
<td>2018</td>
<td>$21,000</td>
<td></td>
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<tr>
<td>2020</td>
<td>$22,000</td>
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<tr>
<td>2022</td>
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<td>2024</td>
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<td>2026</td>
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<td>211,548</td>
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**Projections for Annual Obesity-Related Health Spending in Minnesota, 2010-2030**

*In millions of dollars*
### Obesity-Related Health Care Costs in Minnesota

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<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>410,004</td>
<td>65,368</td>
<td>$1,350,000,000</td>
<td>127,368</td>
<td>$4,367,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>77,233</td>
<td>5,024</td>
<td>$118,000,000</td>
<td>8,338</td>
<td>$230,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>298,457</td>
<td>54,304</td>
<td>$2,071,000,000</td>
<td>111,066</td>
<td>$5,242,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>990,242</td>
<td>60,985</td>
<td>$286,000,000</td>
<td>105,240</td>
<td>$783,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>998,206</td>
<td>31,481</td>
<td>$365,000,000</td>
<td>56,923</td>
<td>$1,013,000,000</td>
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<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>284,269</td>
<td>45,988</td>
<td>$774,000,000</td>
<td>86,347</td>
<td>$2,472,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>46,018</td>
<td>2,591</td>
<td>$34,000,000</td>
<td>4,795</td>
<td>$79,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>183,417</td>
<td>35,444</td>
<td>$1,122,000,000</td>
<td>66,897</td>
<td>$2,681,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>595,822</td>
<td>35,861</td>
<td>$145,000,000</td>
<td>56,741</td>
<td>$357,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>589,477</td>
<td>19,509</td>
<td>$191,000,000</td>
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*In millions of dollars*
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<td>90,942</td>
<td>$1,575,000,000</td>
<td>179,659</td>
<td>$5,084,000,000</td>
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<td>96,772</td>
<td>6,852</td>
<td>$186,000,000</td>
<td>13,704</td>
<td>$438,000,000</td>
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<td>383,542</td>
<td>73,330</td>
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<td>152,070</td>
<td>$5,935,000,000</td>
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<td>Hypertension</td>
<td>1,221,011</td>
<td>77,117</td>
<td>$295,000,000</td>
<td>133,798</td>
<td>$823,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>1,207,427</td>
<td>40,031</td>
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**Obesity** is defined as an excessively high amount of fatty tissue in relation to lean tissue. An adult is considered to be obese if his or her BMI is 30 or above.

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<table>
<thead>
<tr>
<th>Projections for Annual Obesity-Related Health Spending in Montana, 2010-2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Predicted Costs</td>
</tr>
<tr>
<td>Total Predicted Costs with 5% BMI Reduction</td>
</tr>
</tbody>
</table>

*In millions of dollars*
Obesity-Related Health Care Costs in Montana

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$715,000,000</td>
<td>$1,939,000,000</td>
</tr>
</tbody>
</table>

Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Cost Savings by 2020, if BMI is Reduced by 5% (cumulative)</th>
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</thead>
<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>83,849</td>
<td>13,156</td>
<td>$234,000,000</td>
<td>26,522</td>
<td>$758,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>16,490</td>
<td>868</td>
<td>$17,000,000</td>
<td>1,637</td>
<td>$46,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>64,244</td>
<td>12,018</td>
<td>$358,000,000</td>
<td>23,617</td>
<td>$847,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>212,207</td>
<td>12,428</td>
<td>$49,000,000</td>
<td>21,391</td>
<td>$126,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>207,585</td>
<td>6,418</td>
<td>$64,000,000</td>
<td>11,948</td>
<td>$175,000,000</td>
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<tr>
<td>13.0%</td>
<td>24.6%</td>
<td>53.6%</td>
<td>47.4%</td>
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A wide range of studies have found that effective disease-prevention programs in communities can improve nutrition, increase physical activity and reduce obesity rates.

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In 2011, the American Heart Association (AHA) published a review of more than 200 studies and concluded that most cardiovascular disease can be prevented or at least delayed until old age through a combination of direct medical care and community-based prevention programs and policies. Some of the key findings included:

- Every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses.
- For every $1 spent in wellness programs, companies could save $3.27 in medical costs and $2.73 in absenteeism costs.
- Some interventions have been shown to help improve nutrition and activity habits in just one year and had a return of $1.17 for every $1 spent.
- Participants in community-based programs who focused on improving nutrition and increasing physical activity had a 58 percent reduction in incidence of type 2 diabetes compared with drug therapy, which had a 31 percent reduction.
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**Body mass index** (BMI) is a calculation based on an individual’s weight and height:

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\]

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![Graph showing projected obesity-related health spending in Nebraska from 2010 to 2030]

*In millions of dollars*
Obesity-Related Health Care Costs in Nebraska

<table>
<thead>
<tr>
<th></th>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$1,334,000,000</td>
<td>$3,686,000,000</td>
</tr>
</tbody>
</table>

Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<th>Potential Cost Savings by 2030, if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>152,276</td>
<td>24,784</td>
<td>$458,000,000</td>
<td>47,577</td>
<td>$1,456,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>29,132</td>
<td>1,935</td>
<td>$41,000,000</td>
<td>3,243</td>
<td>$79,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>116,013</td>
<td>20,435</td>
<td>$629,000,000</td>
<td>40,796</td>
<td>$1,593,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>364,659</td>
<td>21,872</td>
<td>$91,000,000</td>
<td>36,005</td>
<td>$238,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>361,250</td>
<td>11,093</td>
<td>$116,000,000</td>
<td>20,601</td>
<td>$321,000,000</td>
</tr>
</tbody>
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<tr>
<th></th>
<th>Obesity Rate in 1995</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>15.2%</td>
<td>28.4%</td>
<td>56.9%</td>
<td>50.6%</td>
</tr>
</tbody>
</table>

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### Projections for Annual Obesity-Related Health Spending in Nevada, 2010-2030

*In millions of dollars*
Obesity-Related Health Care Costs in Nevada

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>$2,095,000,000</td>
<td>$5,921,000,000</td>
</tr>
</tbody>
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Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th>Type 2 Diabetes</th>
<th>2010 Number of Cases</th>
<th>2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Cost Savings by 2020, if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<th>Potential Cases Avoided by 2030, if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>214,217</td>
<td>$690,000,000</td>
<td>65,087</td>
<td>$2,172,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>37,310</td>
<td>$82,000,000</td>
<td>4,521</td>
<td>$164,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>144,554</td>
<td>$989,000,000</td>
<td>55,556</td>
<td>$2,653,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>511,848</td>
<td>$149,000,000</td>
<td>53,677</td>
<td>$401,000,000</td>
<td></td>
<td></td>
</tr>
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<td>512,502</td>
<td>$191,000,000</td>
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Projections for Annual Obesity-Related Health Spending in New Hampshire, 2010-2030

*In millions of dollars
# Obesity-Related Health Care Costs in New Hampshire

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<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,158,000,000</td>
<td>$3,257,000,000</td>
</tr>
</tbody>
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## Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
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<td>18,692</td>
<td>$385,000,000</td>
<td>38,425</td>
<td>$1,239,000,000</td>
</tr>
<tr>
<td>*<em>Obesity-Related Cancers</em></td>
<td>20,353</td>
<td>1,318</td>
<td>$31,000,000</td>
<td>2,715</td>
<td>$65,000,000</td>
</tr>
<tr>
<td><strong>Coronary Heart Disease &amp; Stroke</strong></td>
<td>76,996</td>
<td>16,082</td>
<td>$561,000,000</td>
<td>35,077</td>
<td>$1,467,000,000</td>
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<td>31,320</td>
<td>$217,000,000</td>
</tr>
<tr>
<td><strong>Arthritis</strong></td>
<td>262,518</td>
<td>8,806</td>
<td>$97,000,000</td>
<td>16,807</td>
<td>$265,000,000</td>
</tr>
</tbody>
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| Projections for Annual Obesity-Related Health Spending in New Jersey, 2010-2030 |
|---------------------------------|---------------------------------|
|                                 | $1,000                          |
|                                 | $1,050                          |
|                                 | $1,100                          |
|                                 | $1,150                          |
|                                 | $1,200                          |
|                                 | $1,250                          |
|                                 | $1,300                          |
|                                 | $1,350                          |
|                                 | $1,400                          |
|                                 | $1,450                          |
| 2010                            | Total Predicted Costs           |
|                                 | Total Predicted Costs with 5% BMI Reduction |
| 2012                            |                                 |
| 2014                            |                                 |
| 2016                            |                                 |
| 2018                            |                                 |
| 2020                            |                                 |
| 2022                            |                                 |
| 2024                            |                                 |
| 2026                            |                                 |
| 2028                            |                                 |
| 2030                            |                                 |

*In millions of dollars
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<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
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<tr>
<td>$471,000,000</td>
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<thead>
<tr>
<th></th>
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<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<tr>
<td>Type 2 Diabetes</td>
<td>607,689</td>
<td>103,119</td>
<td>$158,000,000</td>
<td>202,357</td>
<td>$520,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>110,882</td>
<td>6,616</td>
<td>$13,000,000</td>
<td>13,232</td>
<td>$31,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>398,981</td>
<td>77,009</td>
<td>$220,000,000</td>
<td>168,660</td>
<td>$610,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,438,554</td>
<td>100,473</td>
<td>$37,000,000</td>
<td>177,570</td>
<td>$104,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>1,504,360</td>
<td>48,075</td>
<td>$40,000,000</td>
<td>93,945</td>
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![Graph showing projections for annual obesity-related health spending in New Mexico, 2010-2030.](image)

*In millions of dollars*
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<thead>
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</tr>
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<td>1,978</td>
<td>$39,000,000</td>
<td>3,665</td>
<td>$72,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>123,330</td>
<td>21,384</td>
<td>$730,000,000</td>
<td>43,102</td>
<td>$1,782,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>419,506</td>
<td>23,821</td>
<td>$95,000,000</td>
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*In millions of dollars*
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<td>$206,000,000</td>
<td>29,392</td>
<td>$481,000,000</td>
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<td>1,140,661</td>
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<td>$6,777,000,000</td>
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<td>$17,296,000,000</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Total Predicted Costs</th>
<th>Total Predicted Costs with 5% BMI Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$16,000</td>
<td>$16,000</td>
</tr>
<tr>
<td>2012</td>
<td>$16,500</td>
<td>$16,500</td>
</tr>
<tr>
<td>2014</td>
<td>$17,000</td>
<td>$17,000</td>
</tr>
<tr>
<td>2016</td>
<td>$17,500</td>
<td>$17,500</td>
</tr>
<tr>
<td>2018</td>
<td>$18,000</td>
<td>$18,000</td>
</tr>
<tr>
<td>2020</td>
<td>$18,500</td>
<td>$18,500</td>
</tr>
<tr>
<td>2022</td>
<td>$19,000</td>
<td>$19,000</td>
</tr>
<tr>
<td>2024</td>
<td>$19,500</td>
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</tr>
<tr>
<td>2026</td>
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*In millions of dollars*
Obesity-Related Health Care Costs in North Carolina

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<tr>
<td>$7,633,000,000</td>
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<tr>
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<th>2010 Number of Cases</th>
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<tr>
<td>Type 2 Diabetes</td>
<td>820,118</td>
<td>134,610</td>
<td>$2,363,000,000</td>
<td>261,785</td>
<td>$7,746,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>142,818</td>
<td>9,174</td>
<td>$371,000,000</td>
<td>17,382</td>
<td>$742,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>543,752</td>
<td>106,510</td>
<td>$3,733,000,000</td>
<td>213,310</td>
<td>$9,360,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,831,530</td>
<td>113,366</td>
<td>$486,000,000</td>
<td>195,735</td>
<td>$1,311,000,000</td>
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<tr>
<td>Arthritis</td>
<td>1,843,890</td>
<td>62,284</td>
<td>$679,000,000</td>
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<tr>
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## Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<td>8,809</td>
<td>$150,000,000</td>
<td>16,873</td>
<td>$491,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>11,572</td>
<td>739</td>
<td>$19,000,000</td>
<td>1,272</td>
<td>$38,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>46,993</td>
<td>7,222</td>
<td>$183,000,000</td>
<td>14,116</td>
<td>$467,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>145,630</td>
<td>7,667</td>
<td>$26,000,000</td>
<td>13,248</td>
<td>$75,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>141,984</td>
<td>4,001</td>
<td>$39,000,000</td>
<td>7,585</td>
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*In millions of dollars*
Obesity-Related Health Care Costs in Ohio

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<td>2,316,148</td>
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*In millions of dollars*
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Obesity-Related Health Care Costs in Oregon

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<tbody>
<tr>
<td>$2,791,000,000</td>
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<thead>
<tr>
<th>2010 Number of Cases</th>
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</thead>
<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>313,737</td>
<td>49,676</td>
<td>$936,000,000</td>
<td>98,578</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>58,349</td>
<td>3,678</td>
<td>$89,000,000</td>
<td>7,240</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>225,575</td>
<td>40,229</td>
<td>$1,330,000,000</td>
<td>82,200</td>
</tr>
<tr>
<td>Hypertension</td>
<td>749,127</td>
<td>43,442</td>
<td>$182,000,000</td>
<td>77,631</td>
</tr>
<tr>
<td>Arthritis</td>
<td>751,876</td>
<td>24,122</td>
<td>$251,000,000</td>
<td>47,508</td>
</tr>
</tbody>
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<td>1,135,646</td>
<td>185,919</td>
<td>$3,208,000,000</td>
<td>366,995</td>
<td>$10,318,000,000</td>
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<tr>
<td>Obesity-Related Cancers*</td>
<td>227,588</td>
<td>15,674</td>
<td>$217,000,000</td>
<td>28,162</td>
<td>$393,000,000</td>
</tr>
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<td>892,129</td>
<td>150,111</td>
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<td>14,308</td>
<td>$297,000,000</td>
<td>29,889</td>
<td>$1,018,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>17,094</td>
<td>1,041</td>
<td>$29,000,000</td>
<td>2,092</td>
<td>$68,000,000</td>
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<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>64,087</td>
<td>11,722</td>
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<td>207,285</td>
<td>12,973</td>
<td>$57,000,000</td>
<td>23,602</td>
<td>$155,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>208,610</td>
<td>7,170</td>
<td>$79,000,000</td>
<td>13,856</td>
<td>$229,000,000</td>
</tr>
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<tr>
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<tr>
<td>12.8%</td>
<td>25.4%</td>
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- The number of new cases of diabetes could be 7.9 million (+/- 1.6 million) per year, which means it could be as low as 6.3 million or as high as 9.5 million; and
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**Projections for Annual Obesity-Related Health Spending in South Carolina, 2010-2030**

*In millions of dollars*
**Obesity-Related Health Care Costs in South Carolina**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>$3,319,000,000</td>
<td>$9,309,000,000</td>
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<tr>
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<th>2010 Number of Cases</th>
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<tr>
<td>Type 2 Diabetes</td>
<td>429,273</td>
<td>68,972</td>
<td>$1,099,000,000</td>
<td>133,498</td>
<td>$3,548,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>75,148</td>
<td>5,007</td>
<td>$52,000,000</td>
<td>9,124</td>
<td>$88,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>289,176</td>
<td>56,853</td>
<td>$1,682,000,000</td>
<td>114,735</td>
<td>$4,297,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>961,722</td>
<td>56,291</td>
<td>$202,000,000</td>
<td>101,446</td>
<td>$568,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>947,357</td>
<td>29,432</td>
<td>$278,000,000</td>
<td>58,678</td>
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Projections for Annual Obesity-Related Health Spending in South Dakota, 2010-2030

*In millions of dollars*
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<thead>
<tr>
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<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$569,000,000</td>
<td>$1,553,000,000</td>
</tr>
</tbody>
</table>

## Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
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<th>Potential Cost Savings by 2030, if BMI is Reduced by 5% (cumulative)</th>
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</thead>
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<tr>
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<td>70,269</td>
<td>11,166</td>
<td>$196,000,000</td>
<td>21,780</td>
<td>$638,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>13,490</td>
<td>832</td>
<td>$8,000,000</td>
<td>1,467</td>
<td>$8,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>54,373</td>
<td>9,246</td>
<td>$277,000,000</td>
<td>17,899</td>
<td>$660,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>169,415</td>
<td>9,724</td>
<td>$38,000,000</td>
<td>16,721</td>
<td>$103,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>166,267</td>
<td>4,928</td>
<td>$52,000,000</td>
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Projections for Annual Obesity-Related Health Spending in Tennessee, 2010-2030

*In millions of dollars*
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</tr>
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<tbody>
<tr>
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<td>102,390</td>
<td>$1,676,000,000</td>
<td>201,257</td>
<td>$5,505,000,000</td>
<td></td>
</tr>
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<td>Obesity-Related Cancers*</td>
<td>101,301</td>
<td>7,236</td>
<td>$124,000,000</td>
<td>14,151</td>
<td>$246,000,000</td>
</tr>
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<td>Coronary Heart Disease &amp; Stroke</td>
<td>396,752</td>
<td>79,145</td>
<td>$2,380,000,000</td>
<td>162,325</td>
<td>$6,034,000,000</td>
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<td>1,299,689</td>
<td>83,372</td>
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**Projections for Annual Obesity-Related Health Spending in Texas, 2010-2030**

*In millions of dollars*
**Obesity-Related Health Care Costs in Texas**

<table>
<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$19,386,000,000</td>
<td>$54,194,000,000</td>
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</table>

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<table>
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<tr>
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<th>2010 Number of Cases</th>
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<th>Potential Cost Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,962,059</td>
<td>321,447</td>
<td>$6,597,000,000</td>
<td>605,152</td>
<td>$21,338,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>328,379</td>
<td>20,540</td>
<td>$560,000,000</td>
<td>34,918</td>
<td>$1,061,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>1,261,654</td>
<td>230,559</td>
<td>$9,169,000,000</td>
<td>465,739</td>
<td>$23,124,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>4,300,252</td>
<td>271,638</td>
<td>$1,352,000,000</td>
<td>472,671</td>
<td>$3,777,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>4,426,828</td>
<td>149,683</td>
<td>$1,704,000,000</td>
<td>270,868</td>
<td>$4,891,000,000</td>
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<table>
<thead>
<tr>
<th>Year</th>
<th>Total Predicted Costs</th>
<th>Total Predicted Costs with 5% BMI Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$4,200</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>$4,400</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>$4,600</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>$4,800</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>$5,200</td>
<td></td>
</tr>
<tr>
<td>2022</td>
<td>$5,400</td>
<td></td>
</tr>
<tr>
<td>2024</td>
<td>$5,600</td>
<td></td>
</tr>
<tr>
<td>2026</td>
<td>$5,800</td>
<td></td>
</tr>
<tr>
<td>2028</td>
<td>$6,000</td>
<td></td>
</tr>
<tr>
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<td>$6,200</td>
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</tr>
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<thead>
<tr>
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<tbody>
<tr>
<td>$2,122,000,000</td>
<td>$5,843,000,000</td>
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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>164,385</td>
<td>27,327</td>
<td>$718,000,000</td>
<td>50,992</td>
<td>$2,289,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>29,834</td>
<td>1,747</td>
<td>$47,000,000</td>
<td>2,845</td>
<td>$92,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>113,478</td>
<td>20,030</td>
<td>$1,026,000,000</td>
<td>37,723</td>
<td>$2,530,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>390,890</td>
<td>24,341</td>
<td>$141,000,000</td>
<td>40,202</td>
<td>$393,000,000</td>
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<tr>
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<td>410,666</td>
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<td>8,000</td>
<td>$160,000,000</td>
<td>16,193</td>
<td>$526,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>10,273</td>
<td>614</td>
<td>$9,000,000</td>
<td>1,222</td>
<td>$12,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>38,031</td>
<td>6,978</td>
<td>$243,000,000</td>
<td>14,702</td>
<td>$618,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>128,688</td>
<td>7,605</td>
<td>$34,000,000</td>
<td>13,976</td>
<td>$95,000,000</td>
</tr>
<tr>
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<td>127,660</td>
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Projections for Annual Obesity-Related Health Spending in Virginia, 2010-2030

*In millions of dollars*
**Obesity-Related Health Care Costs in Virginia**

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<tbody>
<tr>
<td>$6,266,000,000</td>
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</thead>
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<tr>
<td>Type 2 Diabetes</td>
<td>644,975</td>
<td>106,956</td>
<td>$2,122,000,000</td>
<td>209,621</td>
<td>$6,837,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>118,372</td>
<td>5,506</td>
<td>$89,000,000</td>
<td>13,764</td>
<td>$195,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>442,803</td>
<td>86,796</td>
<td>$3,041,000,000</td>
<td>183,631</td>
<td>$8,114,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,512,608</td>
<td>96,997</td>
<td>$434,000,000</td>
<td>175,777</td>
<td>$1,219,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>1,519,490</td>
<td>51,899</td>
<td>$579,000,000</td>
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Based on the predicted rise in obesity, researchers found the baseline potential growth in related costs could be $66 billion (+/- 45 billion). Within the potential range, it could be as low as $21 billion or as high as $111 billion.

In addition, due to expected increases in obesity, the projected baseline estimates for:

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The projections in the state-by-state analysis featured in the 2012 *F as in Fat* report are considered to be marginally more accurate than those reported in the national study, because the state-by-state study is based on data from the Behavioral Risk Factor Surveillance System (BRFSS) instead of NHANES. BRFSS provides more data points than NHANES (10 versus seven), which enables researchers to estimate projections more precisely.

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<tr>
<td></td>
<td>550,296</td>
<td>90,361</td>
<td>$1,680,000,000</td>
<td>178,401</td>
<td>$5,534,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>99,240</td>
<td>5,669</td>
<td>$107,000,000</td>
<td>11,748</td>
<td>$239,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>378,316</td>
<td>74,379</td>
<td>$2,575,000,000</td>
<td>151,285</td>
<td>$6,592,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,282,066</td>
<td>83,258</td>
<td>$358,000,000</td>
<td>145,002</td>
<td>$987,000,000</td>
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<tr>
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<td>1,294,975</td>
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**Projections for Annual Obesity-Related Health Spending in West Virginia, 2010-2030**

*In millions of dollars*
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<thead>
<tr>
<th>Potential Savings by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Savings by 2030 if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4,148,000,000</td>
<td>$11,962,000,000</td>
</tr>
</tbody>
</table>

Potential Health and Cost Savings by Top Obesity-Related Health Problems

<table>
<thead>
<tr>
<th></th>
<th>2010 Number of Cases</th>
<th>Potential Cases Avoided by 2020 if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Cost Savings by 2020, if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Cases Avoided by 2030, if BMI is Reduced by 5% (cumulative)</th>
<th>Potential Cost Savings by 2030, if BMI is Reduced by 5% (cumulative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type 2 Diabetes</td>
<td>470,136</td>
<td>74,310</td>
<td>$1,442,000,000</td>
<td>147,935</td>
<td>$4,733,000,000</td>
</tr>
<tr>
<td>Obesity-Related Cancers*</td>
<td>89,046</td>
<td>4,341</td>
<td>$75,000,000</td>
<td>7,882</td>
<td>$187,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>347,847</td>
<td>59,574</td>
<td>$1,968,000,000</td>
<td>123,717</td>
<td>$5,171,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1,130,359</td>
<td>65,742</td>
<td>$286,000,000</td>
<td>114,692</td>
<td>$777,000,000</td>
</tr>
<tr>
<td>Arthritis</td>
<td>1,124,133</td>
<td>34,499</td>
<td>$377,000,000</td>
<td>66,542</td>
<td>$1,091,000,000</td>
</tr>
</tbody>
</table>

2010 baseline for potential cases, costs and savings
* National Heart Forum provided the total cases and cases avoided per 100,000 people, and TFAH used the state’s 2011 census data to translate to the full population-based estimates.
^Top obesity-related cancers include endometrial (uterine), esophageal, kidney, colon and post-menopausal breast cancer.

Adult Obesity Rates in Wisconsin

<table>
<thead>
<tr>
<th>Obesity Rate in 1995</th>
<th>Obesity Rate in 2011</th>
<th>Projected Obesity Rate in 2030 based on current trajectory*</th>
<th>Projected Obesity Rate in 2030 if BMI Decreased by 5%*</th>
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<tr>
<td>16.4%</td>
<td>27.7%</td>
<td>56.3%</td>
<td>49.4%</td>
</tr>
</tbody>
</table>

*All ages, all genders, NHF adjusted for self-reporting bias.

Peer-Reviewed Projections of Future Trends

The analysis is based on a model developed by researchers at the National Heart Forum (NHF). Micro Health Simulations used the model in a peer-reviewed study, “Health and Economic Burden of the Projected Obesity Trends in the USA and UK,” published in 2011 in The Lancet. The full methodology is available in Appendix C of the 2012 F as in Fat report (available at...
All models have limitations in forecasting the future, but they help predict the trajectory of trends based on past data. Trends can, of course, change significantly over time for a variety of reasons. However, having a sense of potential scenarios is particularly helpful to understanding patterns, such as potential growth rates for diseases and costs projections, which can inform policy priorities and decisions.

The NHF study published in *The Lancet* in 2011 developed *national* projections for adult obesity in the United States and the potential growth in related disease rates and costs between 2010 and 2030, using data from the National Health and Nutrition Examination Survey (NHANES).

The NHF study found the number of obese Americans could grow from 32 percent now to around 50 percent (+/- 5 percent) in 2030.

Based on the predicted rise in obesity, researchers found the baseline potential growth in related costs could be $66 billion (+/− 45 billion). Within the potential range, it could be as low as $21 billion or as high as $111 billion.

In addition, due to expected increases in obesity, the projected baseline estimates for:

- The number of new cases of diabetes could be 7.9 million (+/− 1.6 million) per year, which means it could be as low as 6.3 million or as high as 9.5 million;
- The number of new cases of chronic heart disease and stroke could be 6.8 million (+/− 1.5 million) per year, which means it could be as low as 5.3 million or as high as 8.3 million; and
- The number of new cases of cancer could be 500,000 (+/− 0.1 million) per year, which means it could be as low as 400,000 or as high as 600,000.

The projections in the *state-by-state* analysis featured in the 2012 *F as in Fat* report are considered to be marginally more accurate than those reported in the national study, because the state-by-state study is based on data from the Behavioral Risk Factor Surveillance System (BRFSS) instead of NHANES. BRFSS provides more data points than NHANES (10 versus seven), which enables researchers to estimate projections more precisely.

### Effective Ways to Reduce Obesity

According to the U.S. Centers for Disease Control and Prevention (CDC), more than half of all Americans live with a preventable chronic disease, and many such diseases are related to obesity, poor nutrition and physical inactivity.

A wide range of studies have found that effective disease-prevention programs in communities can improve nutrition, increase physical activity and reduce obesity rates.

- CDC’s Community Preventive Services Taskforce conducts a systematic review and evaluation process to determine effective programs and policies for improving health and preventing disease. The results, published in the *Community Guide for Preventive Services*, feature a series of evidence-based, community approaches to increasing physical activity, promoting good nutrition, lowering diabetes rates and reducing obesity. The approaches include improving the built environment by building sidewalks and increasing access to parks; starting workplace wellness programs; and increasing physical activity in schools.
• *The Compendium of Proven Community-Based Prevention Programs* by The New York Academy of Medicine (NYAM) includes a summary and examples from an extensive literature review that NYAM conducted of peer-reviewed studies evaluating the effectiveness of community-based disease-prevention programs. NYAM identified 84 articles, including programs that can directly reduce obesity and obesity-related diseases.

• In 2011, the American Heart Association (AHA) published a review of more than 200 studies and concluded that most cardiovascular disease can be prevented or at least delayed until old age through a combination of direct medical care and community-based prevention programs and policies. Some of the key findings included:

  - Every $1 spent on building biking trails and walking paths could save approximately $3 in medical expenses.
  - For every $1 spent in wellness programs, companies could save $3.27 in medical costs and $2.73 in absenteeism costs.
  - Some interventions have been shown to help improve nutrition and activity habits in just one year and had a return of $1.17 for every $1 spent.
  - Participants in community-based programs who focused on improving nutrition and increasing physical activity had a 58 percent reduction in incidence of type 2 diabetes compared with drug therapy, which had a 31 percent reduction.
Bending the Obesity Cost Curve in Wyoming:

Reducing the Average Body Mass Index in the State by 5 Percent Could Lead to Health Care Savings of More than $350 Million in 10 Years and $1 Billion in 20 Years

The number of obese adults has grown dramatically in Wyoming over the past 15 years, and is expected to grow significantly in the next 20 years.

However, by using evidence-based strategies to improve nutrition and increase physical activity in our schools, neighborhoods and work places, Wyoming could significantly reduce obesity-related diseases and health spending.

A new analysis commissioned by the Trust for America’s Health (TFAH) and the Robert Wood Johnson Foundation (RWJF) and conducted by the National Heart Forum (NHF) found that if Wyoming could reduce the average body mass index (BMI) of its residents by only 5 percent, the state could help prevent thousands of cases of type 2 diabetes, coronary heart disease and stroke, hypertension, cancer and arthritis, while saving millions of dollars. For a six-foot-tall person weighing 200 pounds, a 5 percent reduction in BMI would be the equivalent of losing roughly 10 pounds.

**Body mass index** (BMI) is a calculation based on an individual’s weight and height:

\[
BMI = \left( \frac{\text{Weight in pounds}}{(\text{Height in inches}) \times (\text{Height in inches})} \right) \times 703
\]

**Obesity** is defined as an excessively high amount of fatty tissue in relation to lean tissue. An adult is considered to be obese if his or her BMI is 30 or above.

<table>
<thead>
<tr>
<th>Projections for Annual Obesity-Related Health Spending in Wyoming, 2010-2030</th>
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<tbody>
<tr>
<td>$900</td>
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*In millions of dollars
Obesity-Related Health Care Costs in Wyoming

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<td>48,566</td>
<td>7,750</td>
<td>$127,000,000</td>
<td>15,596</td>
<td>$421,000,000</td>
</tr>
<tr>
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<td>9,068</td>
<td>574</td>
<td>$11,000,000</td>
<td>1,068</td>
<td>$21,000,000</td>
</tr>
<tr>
<td>Coronary Heart Disease &amp; Stroke</td>
<td>35,021</td>
<td>6,619</td>
<td>$189,000,000</td>
<td>13,403</td>
<td>$474,000,000</td>
</tr>
<tr>
<td>Hypertension</td>
<td>118,620</td>
<td>7,085</td>
<td>$23,000,000</td>
<td>12,119</td>
<td>$68,000,000</td>
</tr>
<tr>
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<td>116,541</td>
<td>3,744</td>
<td>$37,000,000</td>
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ENDNOTES

1 The BMI of a 6-foot (72-inch) tall, 200-pound person is calculated as follows:

BMI = (Weight in Pounds / (Height in inches x Height in inches)) x 703
BMI = (200/(72 x 72)) x 703
BMI = 27.12

A 5% reduction in BMI for this individual would be:

5% of Original BMI = Original BMI * 5%
5% of Original BMI = 27.12 x 0.05
5% of Original BMI = 1.36

The individual’s BMI after the 5% reduction would be:

Reduced BMI = Original BMI – 5% of Original BMI
Reduced BMI = 27.12 – 1.36
Reduced BMI = 25.76

The individual’s weight after reducing his/her BMI to 25.76 would be:

Reduced BMI = (Reduced Weight/(Height in Inches x Height in Inches)) x 703
25.76 = (New Weight/(72 x 72)) x 703
Reduced Weight = 189.96

The number of pounds the individual lost by reducing his/her BMI by 5% would be:

Pounds lost = Original Weight – Reduced Weight
Pounds lost = 200 – 189.96
Pounds lost = 10.04 pounds

Note: Hypertension and arthritis were not included in The Lancet study, but were included in the state-by-state analysis. Potential new cases of hypertension and arthritis were calculated using the same process as used for diabetes, chronic heart disease and stroke and cancer.


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The BMI of a 6-foot (72-inch) tall, 200-pound person is calculated as follows:

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\[ \text{Reduced BMI} = 27.12 - 1.36 \]

\[ \text{Reduced BMI} = 25.76 \]

The individual's weight after reducing his/her BMI to 25.76 would be:

\[ \text{Reduced BMI} = \frac{\text{New Weight}}{(\text{Height in Inches} \times \text{Height in Inches})} \times 703 \]

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\[ \text{BMI} = \frac{200}{(72 \times 72)} \times 703 \]

\[ \text{BMI} = 27.12 \]

A 5% reduction in BMI for this individual would be:

5% of Original BMI = Original BMI * 5%

5% of Original BMI = 27.12 x 0.05

5% of Original BMI = 1.36

The individual’s BMI after the 5% reduction would be:

Reduced BMI = Original BMI – 5% of Original BMI

Reduced BMI = 27.12 – 1.36

Reduced BMI = 25.76

The individual’s weight after reducing his/her BMI to 25.76 would be:

Reduced BMI = \( \frac{\text{Reduced Weight}}{(\text{Height in Inches} \times \text{Height in Inches})} \times 703 \)

25.76 = \( \frac{\text{New Weight}}{(72 \times 72)} \times 703 \)

Reduced Weight = 189.96

The number of pounds the individual lost by reducing his/her BMI by 5% would be:

Pounds lost = Original Weight – Reduced Weight

Pounds lost = 200 – 189.96

Pounds lost = 10.04 pounds

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The individual's weight after reducing his/her BMI to 25.76 would be:
Reduced BMI = (Reduced Weight/(Height in Inches x Height in Inches)) x 703
25.76 = (New Weight/(72 x 72)) x 703
Reduced Weight = 189.96

The number of pounds the individual lost by reducing his/her BMI by 5% would be:
Pounds lost = Original Weight – Reduced Weight
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The number of pounds the individual lost by reducing his/her BMI by 5% would be:
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The number of pounds the individual lost by reducing his/her BMI by 5% would be:
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Reduced BMI = 27.12 – 1.36
Reduced BMI = 25.76

The individual’s weight after reducing his/her BMI to 25.76 would be:
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The number of pounds the individual lost by reducing his/her BMI by 5% would be:
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\[ \text{BMI} = \left( \frac{\text{Weight in Pounds}}{\text{Height in inches} \times \text{Height in inches}} \right) \times 703 \]

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A 5% reduction in BMI for this individual would be:

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The individual's BMI after the 5% reduction would be:

\[ \text{Reduced BMI} = \text{Original BMI} - 5\% \text{ of Original BMI} \]

\[ \text{Reduced BMI} = 27.12 - 1.36 \]

\[ \text{Reduced BMI} = 25.76 \]

The individual's weight after reducing his/her BMI to 25.76 would be:

\[ \text{Reduced BMI} = \left( \frac{\text{New Weight}}{\text{Height in Inches} \times \text{Height in Inches}} \right) \times 703 \]

\[ 25.76 = \left( \frac{\text{New Weight}}{72 \times 72} \right) \times 703 \]

\[ \text{Reduced Weight} = 189.96 \]

The number of pounds the individual lost by reducing his/her BMI by 5% would be:

\[ \text{Pounds lost} = \text{Original Weight} - \text{Reduced Weight} \]

\[ \text{Pounds lost} = 200 - 189.96 \]

\[ \text{Pounds lost} = 10.04 \text{ pounds} \]


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Reduced BMI = 27.12 – 1.36
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The individual's weight after reducing his/her BMI to 25.76 would be:
Reduced BMI = (Reduced Weight/(Height in Inches x Height in Inches)) x 703
25.76 = (New Weight/(72 x 72)) x 703
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Reduced BMI = 27.12 – 1.36
Reduced BMI = 25.76

The individual’s weight after reducing his/her BMI to 25.76 would be:
Reduced BMI = (New Weight/(Height in Inches x Height in Inches)) x 703
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The BMI of a 6-foot (72-inch) tall, 200-pound person is calculated as follows:
BMI = (Weight in Pounds / (Height in inches x Height in inches)) x 703
BMI = (200/(72 x 72)) x 703
BMI = 27.12

A 5% reduction in BMI for this individual would be:
5% of Original BMI = Original BMI * 5%
5% of Original BMI = 27.12 x 0.05
5% of Original BMI = 1.36

The individual’s BMI after the 5% reduction would be:
Reduced BMI = Original BMI – 5% of Original BMI
Reduced BMI = 27.12 – 1.36
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The individual’s weight after reducing his/her BMI to 25.76 would be:
Reduced BMI = (Reduced Weight/(Height in Inches x Height in Inches)) x 703
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The individual’s BMI after the 5% reduction would be:

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The individual’s weight after reducing his/her BMI to 25.76 would be:

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