As of 2013, less than half of high school students met current recommendations for level of physical activity.

Importance

Regular physical activity has both short- and long-term health benefits. For adolescents, participation in sports, physical education classes, or any other type of regular exercise helps to build and maintain healthy bones and muscles, controls weight, and has positive psychological benefits. [1] Additionally, regular participation in a range of physical activities, especially where parents are also involved, is associated with decreased likelihood of adopting risky adolescent behaviors (such as violence, and drug use), and better self-esteem and grades. [2]

Adolescents who exercise also improve their long-term health. Participation in physical activity decreases the risk of developing diabetes, heart disease, and hypertension. [3] and, when maintained over the long term, is associated with higher perceived health-related quality of life among adolescents. [4] Additionally, people who are active in their youth tend to remain active and physically fit as adults.

The U.S. Department of Health and Human Services recommends a level of physical activity that increases heart rate and causes heavy breathing some of the time for a total of 60 minutes a day, at least five days a week. [5] The International Consensus Conference on Physical Activity Guidelines for Adolescents recommends that adolescents should be physically active daily and participate in vigorous physical activity three or more times a week for at least twenty minutes. [6]
In 2005, the U.S. Department of Health and Human Services redefined the recommended levels of physical activity, from 20 minutes of vigorous activity at least three days a week, to 60 minutes of activity (that includes vigorous exercise some of the time) at least five days a week. Between 1993 and 2005, the percentage of high school students meeting the former level of recommended physical activity remained fairly steady, ranging between 63 and 69 percent. Between 2005 and 2009, about one-third of high school students met the revised recommended levels of physical activity, with no significant changes over the period. The wording of the question was changed in 2011, so results are not comparable to previous years. In 2011 and 2012, about one-half of students met recommendations, with no significant changes over the period. (Figure 1)

**Differences by Gender**
A much higher percentage of adolescent males participate in vigorous physical activity than do their female peers. Within all racial and ethnic subgroups, levels for males are between 19 and 25 percentage points higher than those for females. (Appendix 1) Differences between males and females are also significant at all grade levels. (Figure 2)

Differences by Race and Hispanic Origin[7]

White students are significantly more likely than black or Hispanic youth to meet recommended levels of physical activity. In 2013, 50 percent of white students met recommended levels, compared with 41 and 45 percent of black and Hispanic youth, respectively. Among
females, Hispanics were also more likely than blacks to meet recommended levels of physical activity (35 compared with 29 percent). There was no similar difference among high school males. (Figure 3)

**Differences by grade**

In 2013, ninth- and tenth-graders were more likely than eleventh- and twelfth-graders to get the recommended amount of physical activity (51 and 49 percent, versus 45 and 44 percent, respectively). (Appendix 1) This difference was driven mainly by a decline among females in the higher grades: among male students, only the difference between ninth- and twelfth-graders was significant. (Figure 2)

**State and Local Estimates**

2013 estimates of vigorous physical activity among high school students (Grades 9-12) are available for select states and cities from the Youth Risk Behavior Survey (YRBS): see Table 96.

2011/12 estimates for all states of the number of days in the past week children (ages six to 17) engaged in vigorous activity for at least 20 minutes are available from the National Survey for Children’s Health, and through the KIDS COUNT Data Center.

**International Estimates**


**National Goals**

Through its Healthy People 2020 initiative, the federal government has set a national goal to increase the number of adolescents who meet current federal physical activity guidelines for aerobic physical activity, from the 2009 level of 18 percent, to 20 percent by 2020. Additional goals are to increase the proportion of public and private schools that require daily physical education for all students, and that require or recommend recess.
More information is available [here](#) (Goals PA-3-7)

### What Works to Make Progress on This Indicator

See Child Trends' LINKS database ("Lifecourse Interventions to Nurture Kids Successfully"), for reviews of many rigorously evaluated programs, including the following which have been shown to be effective:

- [Untitled School-Based Physical Activity Intervention](#)
- [Western Australia Schools Physical Activity and Nutrition (WASPAN)](#)
- [Project SPARK: Sports, Play, and Active Recreation for Kids](#)
- [Lifestyle Education for Activity Program (LEAP)](#)
- [School-Based Cardiovascular Exercise and Nutrition Program with Parent Participation](#)
- [Child and Adolescent Trial for Cardiovascular Health (CATCH)](#)
- [Physical Training Program for Obese Children](#)
- [Untitled Fitness and Nutrition Intervention](#)
- [Heart Smart School Health Promotion](#)

### Related Indicators

- [Participation in School Athletics](#)
- [Overweight Children and Youth](#)
- [Home Computer Access](#)
- [Watching Television](#)

### Definition

Vigorous physical activity here refers to activities that caused increased heart rate and heavy breathing some of the time, for a total of 60 minutes a day, on five of the seven days preceding the survey.

Students from California, Oregon, Washington, and Minnesota were not included in the survey in any year. Additionally, students from Colorado, Iowa, Indiana, and Pennsylvania were not included in the 2013 survey.
Data Sources


## Raw Data Source

Youth Risk Behavior Survey


## Appendix 1Â - Percentage of Students in Grades 9 through 12\(^1\) who Met Currently Recommendations forÂ Physical Activity\(^2\); Selected Years, 1993-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>All Students</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Hispanic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>65.8</td>
<td>67.7</td>
<td>60.0</td>
<td>59.4</td>
</tr>
<tr>
<td>1995</td>
<td>63.7</td>
<td>67.0</td>
<td>53.2</td>
<td>57.3</td>
</tr>
<tr>
<td>1997</td>
<td>63.8</td>
<td>66.8</td>
<td>53.9</td>
<td>60.4</td>
</tr>
<tr>
<td>1999</td>
<td>64.7</td>
<td>67.4</td>
<td>55.6</td>
<td>60.5</td>
</tr>
<tr>
<td>2001</td>
<td>62.6</td>
<td>65.2</td>
<td>59.7</td>
<td>59.3</td>
</tr>
<tr>
<td>2003</td>
<td>68.7</td>
<td>70.2</td>
<td>54.8</td>
<td>69.4</td>
</tr>
<tr>
<td>2005</td>
<td>35.8</td>
<td>38.7</td>
<td>29.5</td>
<td>32.9</td>
</tr>
<tr>
<td>2005*</td>
<td>34.7</td>
<td>37.0</td>
<td>31.1</td>
<td>30.2</td>
</tr>
<tr>
<td>2009*</td>
<td>37.0</td>
<td>39.9</td>
<td>32.6</td>
<td>33.1</td>
</tr>
<tr>
<td>2011**</td>
<td>49.5</td>
<td>52.7</td>
<td>44.4</td>
<td>45.4</td>
</tr>
<tr>
<td>2013**</td>
<td>47.3</td>
<td>50.1</td>
<td>41.0</td>
<td>44.7</td>
</tr>
</tbody>
</table>

### Grade

- **9**: 74.5, 71.5, 72.7, 72.5, 71.9, 68.5, 73.5, 36.9, 38.1, 39.7, 52.9, 50.6
- **10**: 69.5, 69.3, 65.9, 64.7, 67.0, 64.9, 70.5, 38.5, 34.8, 39.3, 51.8, 49.1
- **11**: 62.5, 60.3, 60.0, 58.2, 61.3, 60.1, 67.4, 34.4, 34.8, 36.4, 47.3, 44.7
- **12**: 57.8, 54.9, 57.5, 61.4, 55.5, 55.0, 61.8, 32.9, 29.5, 31.6, 44.8, 43.9

### Male

- **9**: 74.7, 74.4, 72.3, 72.3, 72.6, 70.0, 75.8, 43.8, 43.7, 45.6, 59.9, 57.3
<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Grade</th>
<th>1993</th>
<th>1995</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
<th>2005</th>
<th>2005*</th>
<th>2007*</th>
<th>2009*</th>
<th>2011**</th>
<th>2013**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>9</td>
<td>81.2</td>
<td>79.9</td>
<td>78.7</td>
<td>77.0</td>
<td>77.1</td>
<td>73.1</td>
<td>78.4</td>
<td>42.8</td>
<td>44.4</td>
<td>47.5</td>
<td>61.0</td>
<td>60.5</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>77.2</td>
<td>78.6</td>
<td>74.3</td>
<td>73.3</td>
<td>74.0</td>
<td>71.5</td>
<td>77.8</td>
<td>46.8</td>
<td>45.1</td>
<td>47.4</td>
<td>62.3</td>
<td>57.2</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>71.4</td>
<td>72.3</td>
<td>68.9</td>
<td>67.1</td>
<td>72.2</td>
<td>70.4</td>
<td>74.2</td>
<td>43.8</td>
<td>45.2</td>
<td>46.2</td>
<td>58.5</td>
<td>56.8</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>69.8</td>
<td>67.2</td>
<td>68.4</td>
<td>70.7</td>
<td>66.1</td>
<td>63.7</td>
<td>71.9</td>
<td>41.9</td>
<td>38.7</td>
<td>40.4</td>
<td>57.3</td>
<td>53.9</td>
</tr>
<tr>
<td>White</td>
<td>9</td>
<td>67.5</td>
<td>61.6</td>
<td>66.1</td>
<td>68.0</td>
<td>67.3</td>
<td>63.6</td>
<td>68.4</td>
<td>30.8</td>
<td>31.5</td>
<td>30.8</td>
<td>44.5</td>
<td>40.7</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>61.1</td>
<td>59.3</td>
<td>55.7</td>
<td>56.2</td>
<td>60.1</td>
<td>58.2</td>
<td>63.0</td>
<td>30.0</td>
<td>24.4</td>
<td>30.5</td>
<td>40.3</td>
<td>40.7</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>52.7</td>
<td>47.2</td>
<td>49.4</td>
<td>49.2</td>
<td>50.8</td>
<td>49.4</td>
<td>60.7</td>
<td>25.1</td>
<td>24.6</td>
<td>26.0</td>
<td>35.7</td>
<td>33.1</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>45.4</td>
<td>42.4</td>
<td>43.6</td>
<td>52.3</td>
<td>45.4</td>
<td>46.3</td>
<td>51.7</td>
<td>24.0</td>
<td>20.6</td>
<td>22.4</td>
<td>32.0</td>
<td>34.1</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>9</td>
<td>58.8</td>
<td>56.7</td>
<td>58.4</td>
<td>59.7</td>
<td>59.8</td>
<td>58.1</td>
<td>63.3</td>
<td>30.2</td>
<td>27.9</td>
<td>31.3</td>
<td>42.6</td>
<td>40.5</td>
</tr>
<tr>
<td>White</td>
<td>10</td>
<td>48.8</td>
<td>41.3</td>
<td>41.3</td>
<td>47.2</td>
<td>47.8</td>
<td>44.9</td>
<td>53.1</td>
<td>21.3</td>
<td>21.0</td>
<td>21.9</td>
<td>31.9</td>
<td>29.3</td>
</tr>
<tr>
<td>Black</td>
<td>11</td>
<td>50.0</td>
<td>45.2</td>
<td>49.9</td>
<td>49.5</td>
<td>52.4</td>
<td>51.8</td>
<td>62.6</td>
<td>26.5</td>
<td>21.9</td>
<td>24.9</td>
<td>33.0</td>
<td>35.4</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12</td>
<td>45.4</td>
<td>42.4</td>
<td>43.6</td>
<td>52.3</td>
<td>45.4</td>
<td>46.3</td>
<td>51.7</td>
<td>24.0</td>
<td>20.6</td>
<td>22.4</td>
<td>32.0</td>
<td>34.1</td>
</tr>
</tbody>
</table>

*Revised recommended levels of physical activity.

** Revised recommended levels of physical activity with revised question.

¹ Estimates do not include youth who dropped out of school and therefore may not reflect total national values. Students from California, Oregon, Washington, and Minnesota were not included in the survey in any year. Additionally, students from Colorado, Iowa, Indiana, and Pennsylvania were not included in the 2013 survey.
The recommendations for physical activity changed in 2005. 1993-2005: Recommendations specified activities that caused sweating and hard breathing for at least 20 minutes on at least 3 of the 7 days preceding the survey; 2005-2011: Recommendations specified activities that increased heart rate and caused hard breathing some of the time for a total of 60 minutes/day on at least 5 of the 7 days preceding the survey.

Race/ethnicity estimates from 1999 and later are not directly comparable to earlier years due to federal changes in race definitions. In surveys conducted in 1999 and later, respondents were allowed to select more than one race when selecting their racial category. Estimates presented only include respondents who selected one category when choosing their race.


### Endnotes


[7]Hispanics may be any race. Estimates for whites and blacks in this report do not include Hispanics.
Suggested Citation:


Last updated: August 2014