



YES Occasional Papers

Paper 3

**Obesity Among American Adolescents:
Tracking the Problem and Searching for Causes**

Lloyd D. Johnston
Patrick M. O'Malley



A Study Supported by the Robert Wood Johnson Foundation

YOUTH, EDUCATION, AND SOCIETY

OCCASIONAL PAPER

3

**Obesity Among American Adolescents:
Tracking the Problem and Searching for Causes**

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INTRODUCTION

Obesity is an important and growing health problem in the United States among children and adolescents, as well as among adults (Kimm & Obarzanek, 2002; Ogden, Flegal, Carroll, & Johnson, 2002). In response to a growing concern with these issues at the Robert Wood Johnson Foundation, we have attempted in this occasional paper to provide systematic, nationally representative trend data on a number of variables related to adolescent obesity. These include not only measures used to determine rates of overweight, but a number of measures of potential explanatory factors. This analyses and reporting effort was funded by the Robert Wood Johnson Foundation under a research grant entitled Youth, Education, and Society, which is a component of the Foundation's Bridging the Gap Initiative.

For some years the Monitoring the Future (MTF) study has been tracking self-reported measures of height and weight in annual surveys of nationally representative samples of 8th, 10th, and 12th grade students.¹ These two dimensions are the ingredients for calculating the body mass index or BMI, which is the most widely accepted measure for assessing the appropriateness of an individual's weight for a given age and gender. MTF also has tracked a number of other measures of healthy behaviors such as exercise level, certain eating habits, and amount of sleep. Time spent in sedentary activities has been measured in part by the amount of time spent watching television, working on homework, and sitting at a computer.

Insofar as there is some correlation in the trends of potentially contributing factors and measures of weight and overweight, the results would be suggestive of a causal connection. Conversely, in the absence of such a correlation, a causal connection can be judged less likely than might have been assumed a priori. Such aggregate level trends are just one type of evidence in the search for determining causation, but an important one. Monitoring the Future has been conducted over the years with particular emphasis given to holding constant the methods used for selecting the student samples, conducting the field procedures, and designing the questionnaires and component questions in them. It thus offers an excellent source for the reliable measurement of change in these various conditions and behaviors in the population of American adolescents.

¹The Monitoring the Future study has been supported through a series of investigator-initiated, competitive research grants from the National Institute on Drug Abuse—one of the National Institutes of Health in the U.S. Department of Health and Human Services.

METHODS

Since 1975 Monitoring the Future has gathered data from national samples of American high school seniors—samples that are representative of all seniors in the coterminous United States that year. Since 1991, similarly representative data have been gathered from large national samples of 8th and 10th grade students. Eighth graders are for the most part 13 or 14 years of age, 10th graders are mostly 15 or 16, and 12th graders are mostly 17 or 18. (See Bachman, Johnston, & O'Malley, 2001, or Johnston, O'Malley, and Bachman, 2002, for more detail on the study's design.)

Definition of the Universe Under Study

At each grade level, the universe of students under study is all students in the relevant grade actively enrolled in a public or private secondary school in the coterminous United States. (Students in Alaska, Hawaii, and American protectorates are thus omitted from the defined universe.) This universe definition has remained constant throughout the twenty-eight year history of the study. The sampling procedures are designed to generate representative samples of this universe separately in each of the three grades—8, 10, and 12.

Sampling Procedures

A multi-stage random sampling procedure is used to secure a separate nationwide sample of students in each of the three grades each year. Stage 1 is the selection of particular geographic areas within the coterminous United States. Stage 2 is the selection (with probability proportionate to size) of one or more secondary schools containing the targeted grade in each of those geographic areas. Stage 3 is the selection of students in the targeted grade level within each school.

In schools with fewer than 350 students in the targeted grade, the usual procedure is to include all of them in the data collection, though a smaller sample is sometimes taken to accommodate the needs of the school. In schools with more than 350 students a subset of them is selected, either by randomly sampling entire classrooms or by some other unbiased, random method. Weights are assigned to compensate for differential probabilities of selection at each stage of sampling. Final weights are normalized to average 1.0 so that the weighted number of cases equals the unweighted number of cases overall.

Resulting Samples

Table A shows the numbers of schools and students participating in the study over the years.

For the national survey of 8th graders each year, approximately 150 schools (mostly junior high schools and middle schools) are sampled, and approximately 17,000 students are surveyed. For the 10th graders, approximately 130 high schools have been sampled and about 15,000 students surveyed. For 12th grade, the comparable numbers are approximately 135 schools per year and about 15,000 students surveyed.

TABLE A
Sample Sizes and Response Rates

Grade:	<u>Number of Public Schools</u>			<u>Number of Private Schools</u>			<u>Total Number of Schools</u>				<u>Total Number of Students</u>				<u>Student Response Rate</u>		
	8th	10th	12th	8th	10th	12th	8th	10th	12th	Total	8th	10th	12th	Total	8th	10th	12th
1975	—	—	111	—	—	14	—	—	125	—	—	—	15,791	—	—	—	—
1976	—	—	108	—	—	15	—	—	123	—	—	—	16,678	—	—	—	77
1977	—	—	108	—	—	16	—	—	124	—	—	—	18,436	—	—	—	79
1978	—	—	111	—	—	20	—	—	131	—	—	—	18,924	—	—	—	83
1979	—	—	111	—	—	20	—	—	131	—	—	—	16,662	—	—	—	82
1980	—	—	107	—	—	20	—	—	127	—	—	—	16,524	—	—	—	82
1981	—	—	109	—	—	19	—	—	128	—	—	—	18,267	—	—	—	81
1982	—	—	116	—	—	21	—	—	137	—	—	—	18,348	—	—	—	83
1983	—	—	112	—	—	22	—	—	134	—	—	—	16,947	—	—	—	84
1984	—	—	117	—	—	17	—	—	134	—	—	—	16,499	—	—	—	83
1985	—	—	115	—	—	17	—	—	132	—	—	—	16,502	—	—	—	84
1986	—	—	113	—	—	16	—	—	129	—	—	—	15,713	—	—	—	83
1987	—	—	117	—	—	18	—	—	135	—	—	—	16,843	—	—	—	84
1988	—	—	113	—	—	19	—	—	132	—	—	—	16,795	—	—	—	83
1989	—	—	111	—	—	22	—	—	133	—	—	—	17,142	—	—	—	86
1990	—	—	114	—	—	23	—	—	137	—	—	—	15,676	—	—	—	86
1991	131	107	117	31	14	19	162	121	136	419	17,844	14,996	15,483	48,323	—	—	83
1992	133	106	120	26	19	18	159	125	138	422	19,015	14,997	16,251	50,263	90	88	84
1993	126	111	121	30	17	18	156	128	139	423	18,820	15,516	16,763	51,099	90	86	84
1994	116	116	119	34	14	20	150	130	139	419	17,708	16,080	15,929	49,717	89	88	84
1995	118	117	120	34	22	24	152	139	144	435	17,929	17,285	15,876	51,090	89	87	84
1996	122	113	118	30	20	21	152	133	139	424	18,368	15,873	14,824	49,065	91	87	83
1997	125	113	125	27	18	21	152	131	146	429	19,066	15,778	15,963	50,807	89	86	83
1998	122	110	124	27	19	20	149	129	144	422	18,667	15,419	15,780	49,866	88	87	82
1999	120	117	124	30	23	19	150	140	143	433	17,287	13,885	14,056	45,228	87	85	83
2000	125	121	116	31	24	18	156	145	134	435	17,311	14,576	13,286	45,173	89	86	83
2001	125	117	117	28	20	17	153	137	134	424	16,756	14,286	13,304	44,346	90	88	82
2002	115	113	102	26	20	18	141	133	120	394	15,489	14,683	13,544	43,716	91	85	83

SOURCE: The Monitoring the Future Study, the University of Michigan.

Since 1991, when grades 8 and 10 were added to the study design, between 44,000 and 51,000 students have been surveyed each year, drawn from between 394 and 435 secondary schools in all. Student response rates tend to average about 90%, 87%, and 83% in grades 8, 10, and 12, respectively, with absenteeism on the day of administration being the primary reason for nonresponse. Fewer than 1.5% of the students (or their parents) refuse their participation in the study. Figure A shows the geographical distribution of the MTF sample in a single year.

Because not all questions are included in all of the questionnaire forms used at each grade level, however, the numbers of cases available for a particular question can be substantially less than the overall sample sizes. The tables in Appendix B indicate the case counts for the various variables under study.

The Omission of Dropouts

One limitation in the study design is the exclusion of those young men and women who drop out of high school before graduation—between 15% and 20% of each age cohort nationally, according to U.S. Census statistics. Clearly, the omission of high school dropouts could introduce some biases in the estimation of certain characteristics of the entire age group. This is not really a problem at 8th grade, because very few individuals have dropped out at that point. More dropping out has occurred by 10th grade, though it is still quite limited. Clearly, the missing segment is greatest at 12th grade. However, even there the small proportion of dropouts sets outer limits on the bias. Further, dropout rates have changed rather little in recent decades; therefore, their omission should introduce little or no bias in *change* estimates. (See Chapter 3 and Appendix A in Johnston, O'Malley, and Bachman, 2002, for further detail on this issue.)

Data Collection Procedures

Student data are gathered in the schools by Survey Research Center representatives from the University of Michigan, usually in classrooms during a normal class period, using confidential or anonymous self-administered questionnaires. (For 8th and 10th graders, the questionnaires were changed from confidential to anonymous for half of the questionnaires administered in 1998 and for all questionnaires administered thereafter.²) The questionnaires have consistently been confidential for 12th graders because a sub-sample of each graduating class is selected for follow-up in a long-term panel study as a part of the study's cohort-sequential research design.

Most respondents complete their questionnaire in the 45-minute class period allotted, but missing data rates increase toward the end of the questionnaires, as would be expected. Because the measures of height and weight, as well as some of the other measures discussed in this occasional paper, are placed toward the end of the questionnaires in which they are contained, their missing data rates are higher than average. For example, the measures of height and weight have averaged missing data rates of around 21%, 11%, and 15% in grades 8, 10, and 12 respectively. Nevertheless, whatever bias this may introduce into the estimates, if any, should be fairly constant over time.

²Careful analyses showed that there was no impact from this methodological change on 10th grade data and little, if any, on 8th grade results (see O'Malley, Johnston, & Bachman, 2000).



Note: One dot equals one school.

MEASUREMENT

Questionnaire Design

Data are collected from students by means of self-administered questionnaires using a closed-ended answer format in which all answer categories are pre-specified. The questionnaires are printed in a form that permits optical scanning; thus the students are aware that no one will hear or see their individual answers. They are encouraged to leave blank any questions that they feel that they cannot answer honestly.

Because the content of interest in the Monitoring the Future was very broad, six different questionnaire forms were developed for 12th graders and have been used over all the years in which height and weight have been measured.³ They have a common core of questions, with one section about family and demographic background and another about substance use. When 8th and 10th grades were added to the MTF study design in 1991, we believed that not as broad a set of topics need be covered; thus two questionnaire forms were developed (later expanded to four) and used in both of those grades. Most of the content for these was drawn from the 12th grade questionnaires. Again, there is a shared core across all forms covering background and substance use variables.

Because of the study's emphasis on substance use, both licit and illicit, among American youth, a great deal of the content of the questionnaires deals with that set of topics. However, a considerable amount of information is gathered on various other behaviors, values, attitudes, beliefs, and experiences of youth, particularly in the 12th grade questionnaires. The full range of topics may be found in Bachman, Johnston, and O'Malley, 2001; Johnston, Bachman, and O'Malley, 2001; or other volumes in that series.

Particular sets of variables were chosen for inclusion in the present occasional paper based on their relevance, or at least potential relevance, to childhood obesity. They include height and weight and derivative variables from them, including body mass index (BMI) and measures of "overweight" and "at risk of overweight" based on the BMI. Also included are various other behaviors that would be logical candidates for explaining changes in the proportion of the populations under study becoming increasingly overweight in recent years. The specific measures for each variable are described next, immediately before the descriptive results pertaining to each variable are presented and discussed.

³In earlier years, five questionnaire forms had been used.

RESULTS

Appendix A presents the verbatim questions and answers for all the variables being reported here. Appendix B gives the descriptive statistics in tabular form for each question, covering all of the years for which data exist. These descriptive statistics underlie the figures presented in this section. As can be seen in the various tables and figures in this report, the start dates for various questions differ, with some going back to the beginning of the study and others having been added more recently.

Height

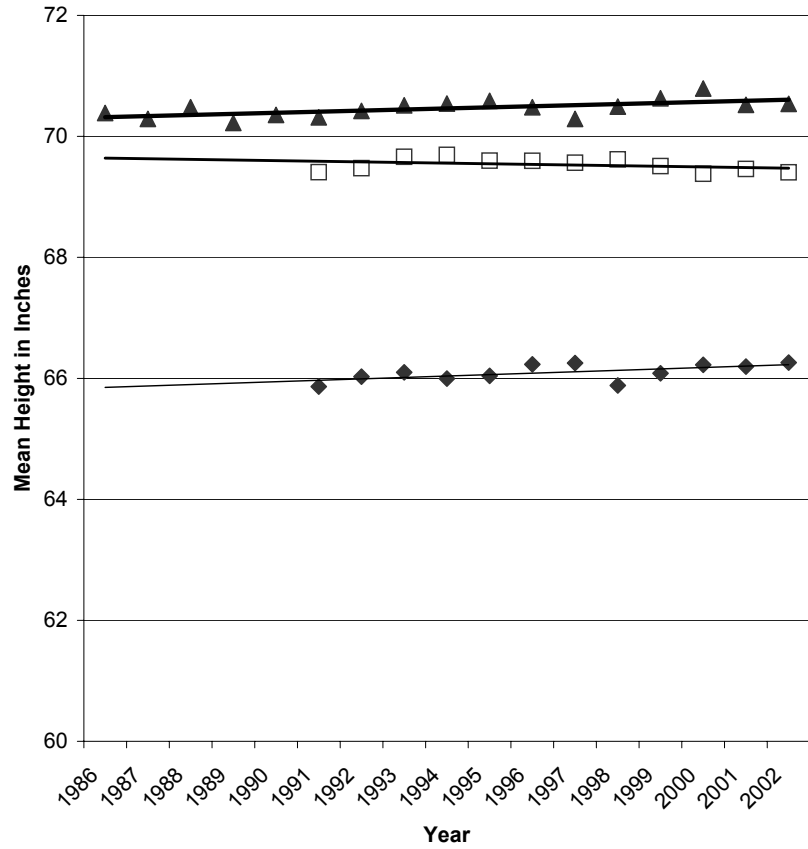
The questions used to measure the central variables for present purposes—height and weight—have been asked of the 12th graders since 1986 and of the 8th and 10th graders since they were first surveyed in 1991. The questions have a closed-ended answer set, with each answer representing a range. (See Appendix A for exact question and answer wording.) For the purposes of the current occasional paper, the midpoint value for each range was assigned to individuals who checked that range. For the top and bottom answer categories, which lack an upper (or lower) bound to the range, a value beyond the bound given was assigned in one case. Specifically, the top weight category of 221+ pounds was assigned a value of 225 pounds for 12th graders as an average weight for individuals in that category.⁴ But for 8th and 10th graders, 221 pounds was used for this category because relatively few respondents chose that top category.

Figure 1 gives the trends in height, measured in inches, separately for males and females in each of the three grades. As with all of the figures to follow, a linear regression line has been fitted to the cross-time data points for each grade, taken separately, to highlight the nature of the changes taking place. The regression lines illustrate that there has been little or no systematic change in the average heights of young Americans. The 8th and 12th grade boys seem to show a very slight upward trend, but this finding is not replicated in 10th grade. Among girls there seems to be no systematic change in the years covered. Obviously girls tend to be shorter than boys, and they also show less growth in height over the developmental period encompassed between 8th and 12th grades, as indicated by the differences in the heights of the lines.

⁴In 2000, for example, 8.1% of the 12th grade males and 2.2% of females indicated that their weight fell into this category.

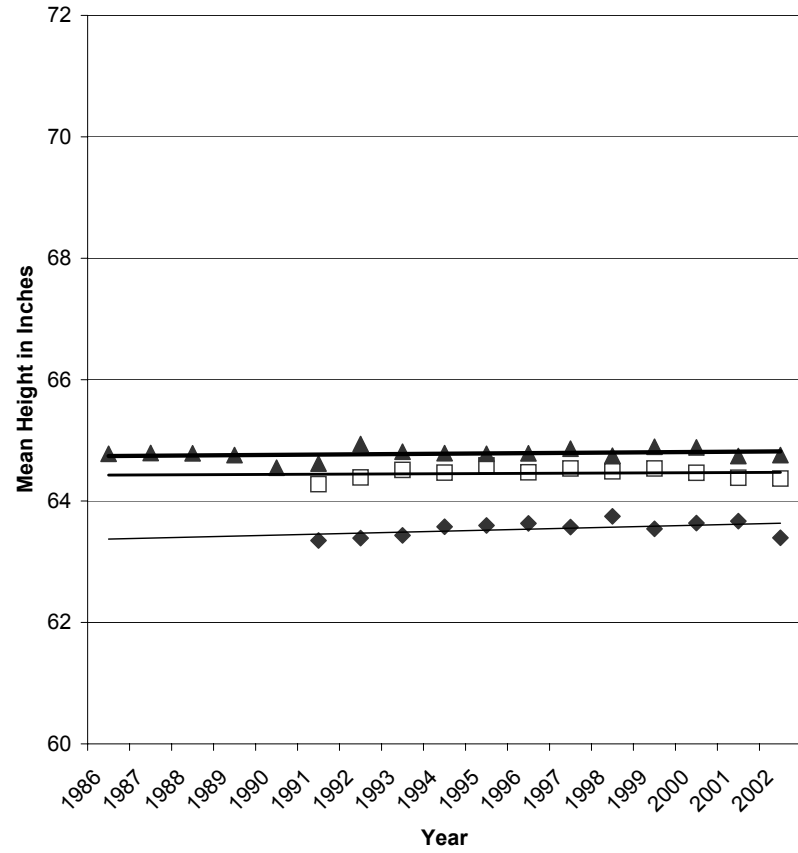
FIGURE 1

**Trends in Mean Height in Inches:
Males in Grades 8, 10, and 12**



◆ 8th Grade □ 10th Grade ▲ 12th Grade

**Trends in Mean Height in Inches:
Females in Grades 8, 10, and 12**



◆ 8th Grade □ 10th Grade ▲ 12th Grade

Weight

Unlike height, weight does show a systematic increase over the time periods in question (the last 16 years for 12th graders and the last 11 years for the 8th and 10th graders; Figure 2). Among boys there has been a fairly steady upward progression in weight, with the mean weight of 12th grade boys increasing by 8.6 pounds between 1986 and 2002. The mean weight of 10th grade boys increased some 6.9 pounds between 1991 and 2002; and the mean weight of 8th grade boys increased some 5.9 pounds in that period.⁵ (See Table 2 in Appendix B for specifics.)

Since 1986, the average weight of 12th grade girls has increased by 8.5 pounds—about the same as among boys (8.6 pounds)—but this reflects a greater *proportional* increase, because the starting weight for girls was 33 pounds less than boys' at the beginning of the period. Tenth grade girls showed a net increase of 6.3 pounds over the past 11 years (versus 6.9 pounds among boys), while 8th grade girls showed an increase of 4.0 pounds (versus 5.9 pounds among boys). The data for the 8th grade girls suggests a leveling off of the increase in weight during the past six or seven years, but a few more data points would make the case more convincing.

In relative terms, the average weight for girls since 1991 has increased by 3.4% in 8th grade, 5.0% in 10th grade, and 4.3% in 12th grade. (Since 1986 the 12th grade girls have shown a 6.7% increase.) For boys, the comparable changes have been 4.6% in 8th grade, 4.5% in 10th grade, and 4.4% in 12th grade since 1991. (Since 1986 the 12th grade boys have shown a 5.6% increase.)

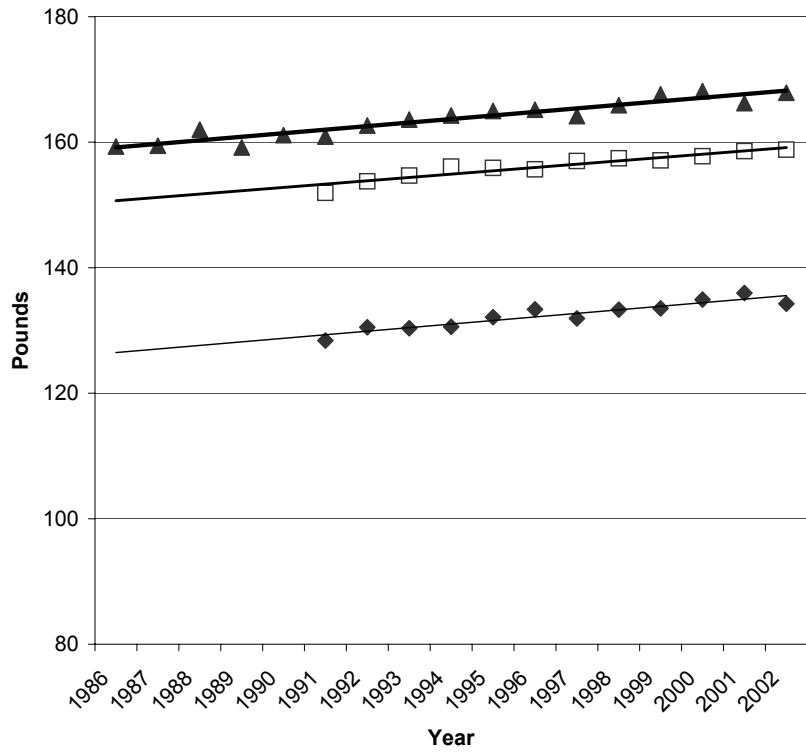
Body Mass Index

Body mass index (BMI) is a function of height and weight, but appropriate ranges for BMI differ as a function of the gender and age of the individual. The formula used to calculate the BMI is presented in Appendix A. The formulas used to calculate measures of excessive BMI for each age and gender were provided by the Centers for Disease Control (CDC) (Kaczmarek et al., 2000). The norms upon which these formulas are based are those adopted in 2000, but the source samples for standards on the BMI for the adolescent age charts are NHANES I (collected in 1971-1974) and NHANES II (collected in 1976-1980). This fact is important because the descriptive category of “overweight” is defined in relative terms, specifically being at or above the weight associated with the 95th percentile for adolescents of a given age and gender. Likewise, the next category of “at risk of overweight” is defined as falling between the weights associated with being between the 85th and 95th percentiles for a given age and gender. These cut points are defined in absolute weight terms at a given historical point and then are held constant for purposes of trend estimation. Because there have been clear increases in average weight since the 1970s, when these categories were normed, there is reason to expect that larger proportions of the population than the top 5% and the next 10% would fall into the weight ranges attached to these descriptive categories. This will make for some seeming anomalies: however,

⁵These calculations are based on the differences between the actual observations for the first and last year of available data, as will be the practice used throughout this paper. As the regression lines illustrate, any one of these point estimates may be somewhat imprecise.

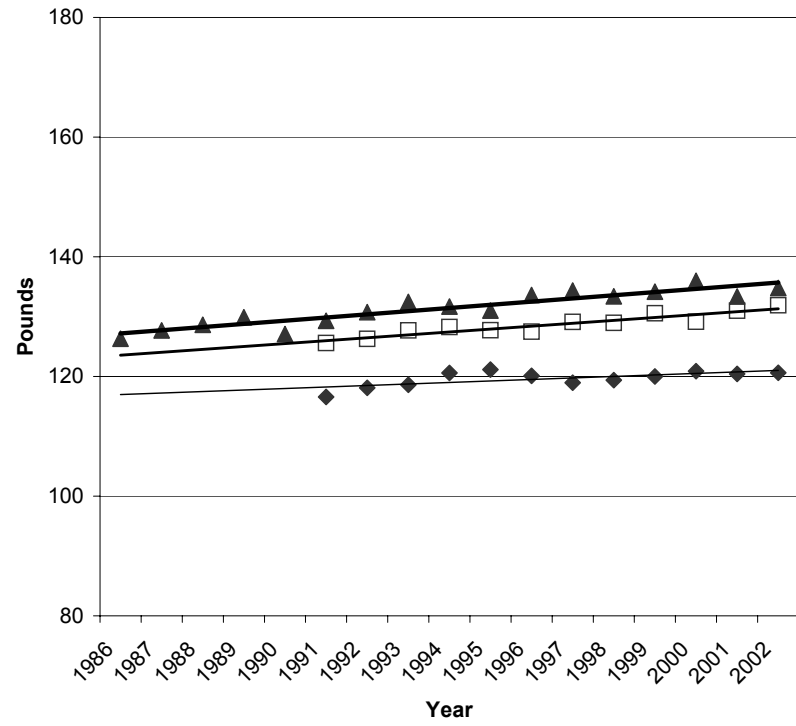
FIGURE 2

**Trends in Mean Weight in Pounds:
Males in Grades 8, 10, and 12**



◆ 8th Grade □ 10th Grade ▲ 12th Grade

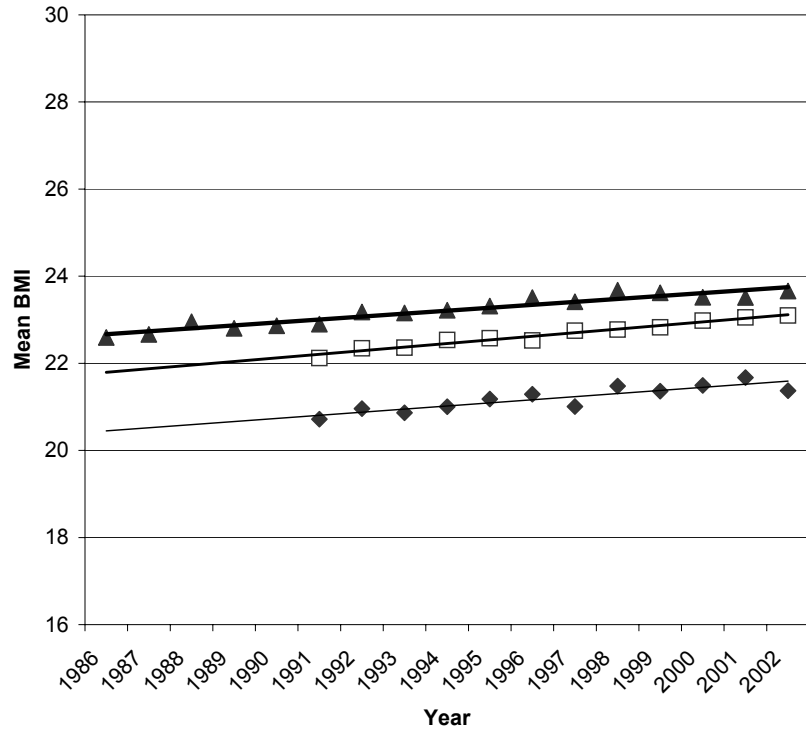
**Trends in Mean Weight in Pounds:
Females in Grades 8, 10, and 12**



◆ 8th Grade □ 10th Grade ▲ 12th Grade

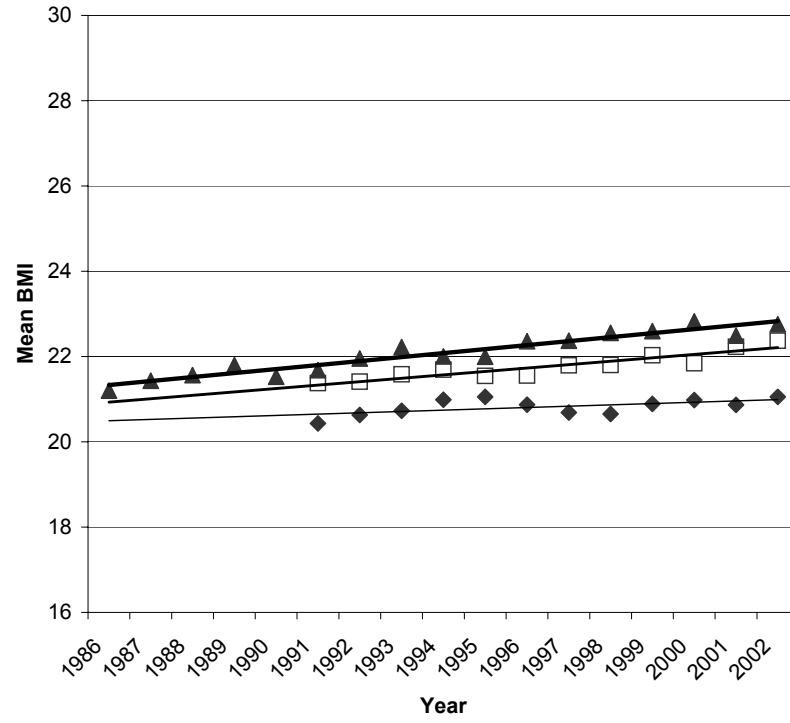
FIGURE 3

**Trends in Mean Body Mass Index:
Males in Grades 8, 10, and 12**



◆ 8th Grade □ 10th Grade ▲ 12th Grade

**Trends in Mean Body Mass Index:
Females in Grades 8, 10, and 12**



◆ 8th Grade □ 10th Grade ▲ 12th Grade

the important point in assessing changes in weight is that there is a fixed absolute body mass value set for each age-by-gender category to define each of these conditions.^{6,7}

Figure 3 provides the trends in the mean BMI for Monitoring the Future study respondents for all years that height and weight data are available. Given that average height has been fairly constant in both genders in all three grades and that weight has been rather steadily increasing, it comes as no surprise that the average BMIs for both males and females have been trending upward. Among both males and females the trend lines have been fairly linear, with the exception that among 8th grade girls the BMI may have leveled off in the mid-1990s. Clearly, a simple linear model does not fit the data particularly well, because there is an increase until about 1995 and then some leveling thereafter. If real, this leveling in the BMI among younger American girls is an encouraging sign for the future and suggests that they may be adopting healthier practices.

Overweight and at Risk of Being Overweight

The categories of overweight and at risk of being overweight have been defined in the previous section and correspond to those in the top 5 percentile and those in the next 10 percentile for their age and gender at the time that the weight data for adolescents were normed. Figures 4 and 5 show the relevant trends. Consistent with the fact that the average BMI has been rising, the proportion fitting the definition of being “overweight” has been rising fairly steadily for boys in all three grades and for girls in grades 10 and 12. (The notable exception is that girls in 8th grade have shown little increase on average since 1991.) Some of the changes are quite dramatic. The proportion of 12th grade boys who meet the criterion of “overweight” rose from 3.3% in 1986 to 11.2% in 2002—a more than three-fold increase.⁸ Among 12th grade girls the increase was from 1.9% in 1986 (which seems a bit low in relation to the trend line) to 7.0% in 2002—again, a more than three-fold increase. (Using the regression line instead of the very end points would suggest a two-fold increase for them.)

The proportions defined as “at risk of overweight” also have been rising in all groups, with one exception—the 8th grade girls. The ascending regression lines are generally not quite as steep for this category as for the overweight category.

If we sum the values for both categories (given in Tables 4 and 5), we find that in 2002 between a quarter and a third of the boys are overweight or at risk of it (23%, 32%, and 27% in grades 8, 10, and 12), as are around a fifth to a quarter of the girls (21%, 23%, and 20%, respectively).

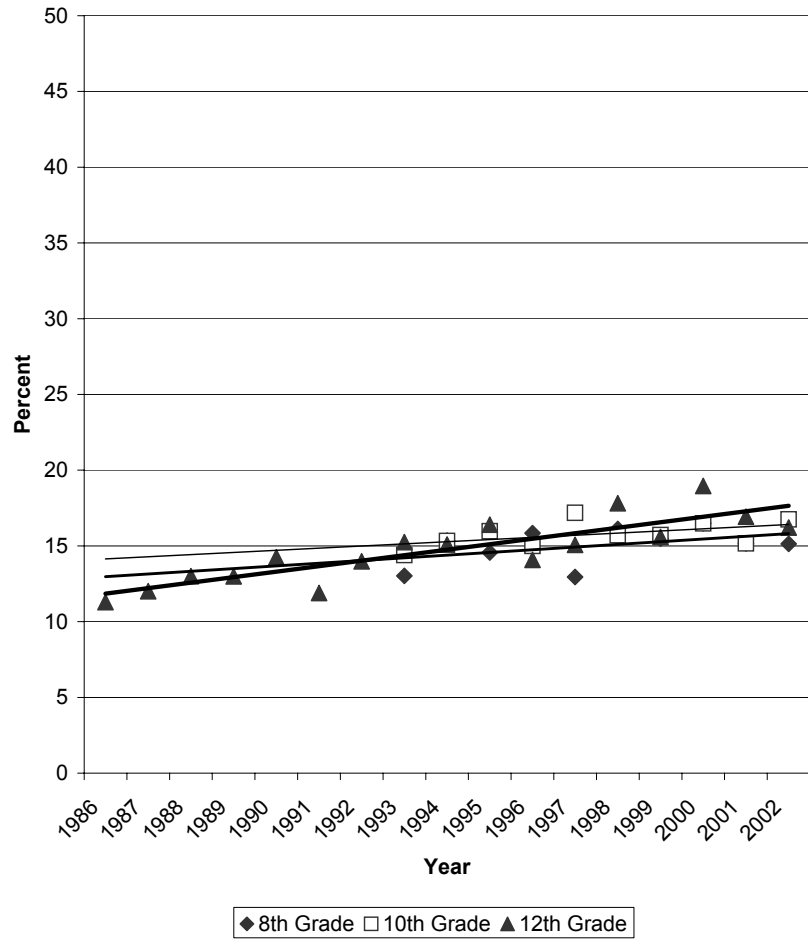
⁶To minimize the effect of “outliers” on the results, the minimum age in months was set at 132 months, 156 months, and 180 months for students in grades 8, 10, and 12 respectively. In other words, it was assumed that it was unlikely that students in these three grades were younger than 11, 13, or 15 years old in grades 8, 10, and 12, respectively. No cap was imposed on the upper end of these age ranges.

⁷For similar reasons, limits were set on the upper end of the BMI scores for each grade based on a formula (75th percentile value + 3X the inter-quartile range). This cap affected the values of only 0.6%, 0.4%, and 0.3% of the students in grades 8, 10, and 12, respectively; and the cap was used only in the data presented in Table 3 of Appendix B, not the calculations of percent “overweight” or “at risk for overweight.”

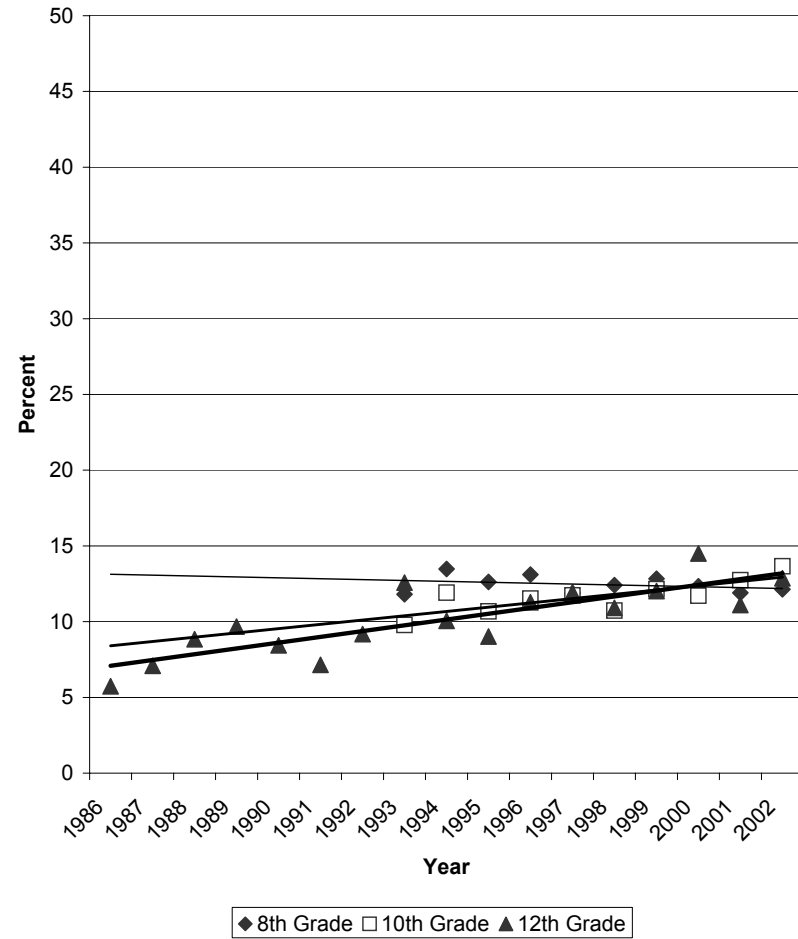
⁸Note that the proportion of 12th grade males meeting the criterion of overweight is lower than the proportions of 8th and 10th graders, but this is not true for girls. We explored this somewhat anomalous finding. In particular, we pursued the hypothesis that differential dropout rates for different racial/ethnic groups, which would affect 12th grade the most, might account for the differences across grades. Although running the data for whites only did narrow somewhat the difference between grades 8 and 10 versus grade 12, most of the difference remained.

FIGURE 4

**Trends in Percent at Risk of Overweight*:
Males in Grades 8, 10, and 12**



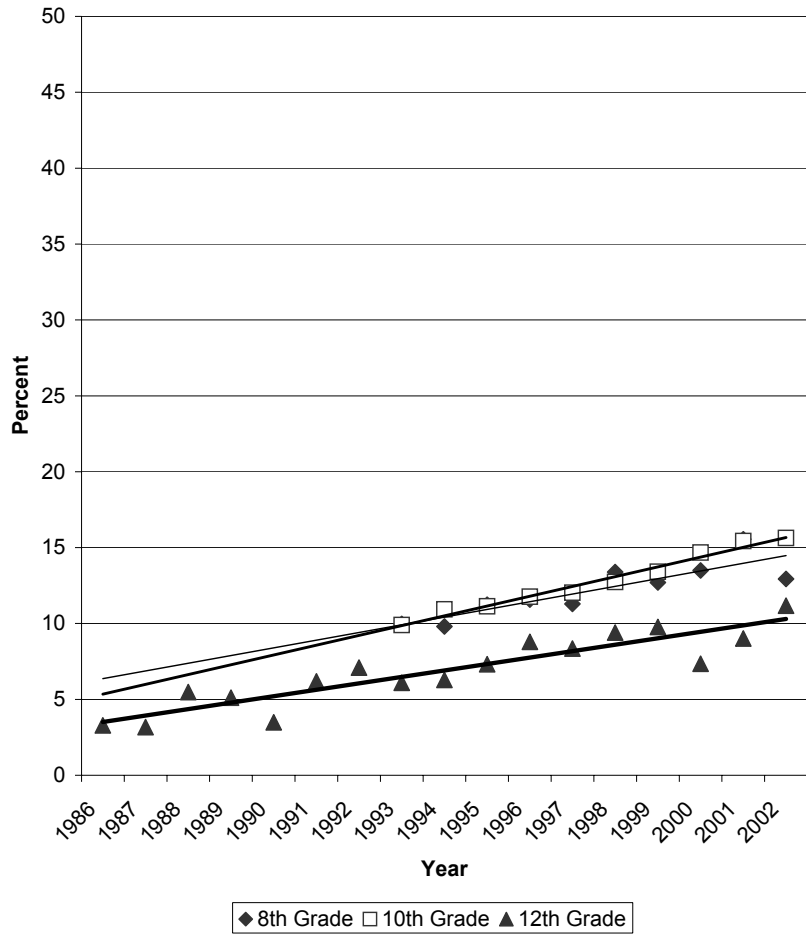
**Trends in Percent at Risk of Overweight*:
Females in Grades 8, 10, and 12**



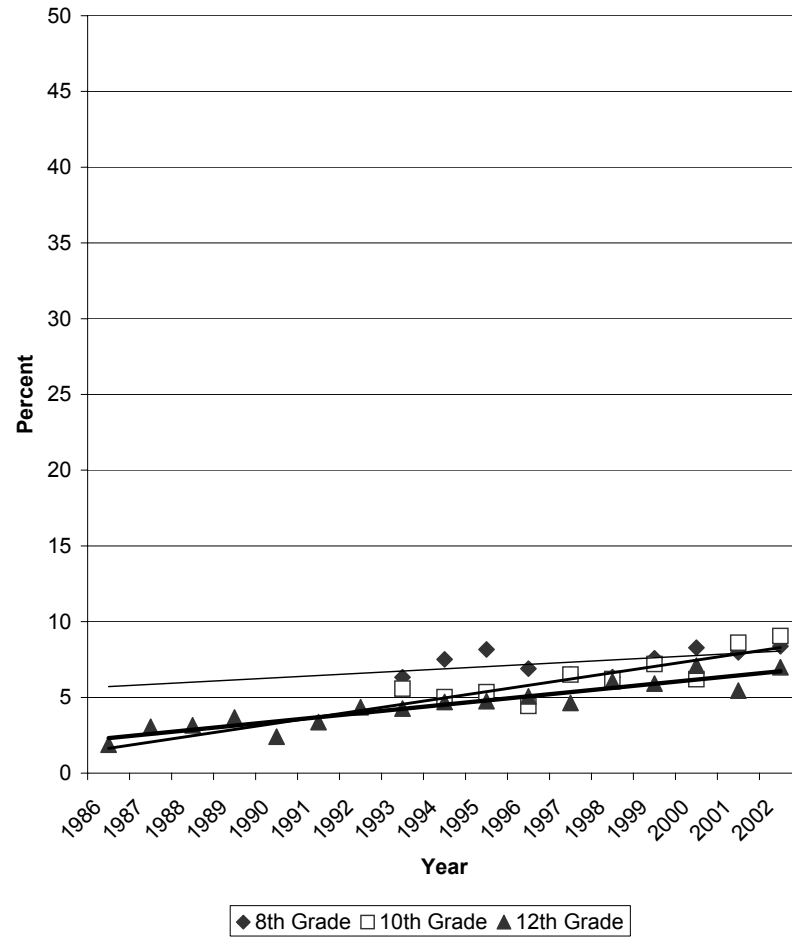
*"At risk" defined as those between the 85th and 95th percentile BMI

FIGURE 5

**Trends in Percent Overweight*:
Males in Grades 8, 10, and 12**



**Trends in Percent Overweight*:
Females in Grades 8, 10, and 12**



*"Overweight" defined as those at or above the 95th percentile BMI.

Exercise

A change in the exercise levels of adolescents would be a logical candidate for explaining changes in their obesity levels. There are three variables available that relate to the amount of time spent in physical activity. One asks respondents how often they get to “exercise vigorously (jogging, swimming, calisthenics, or any other active sports)”. The question and its associated answer scale are provided in Appendix A, and the trend results for this question are presented in Figure 6. It may be seen that at the high school level (grades 10 and 12) there has been a fairly steady erosion in the proportions of both males and females getting such exercise “almost every day” or “every day.” However, at the middle school level (8th grade) there appears not to have been a decline in exercise levels.

A second question asks students how often they “actively participate in sports, athletics, or exercise,” and Figure 7 shows trends in the proportions answering “almost every day.” Fairly consistent with the findings reported on the question charted in Figure 6, boys show declines in 8th and 10th grades, though this time the decline is almost as sharp in 8th grade as in 10th; and the 12th graders show less decline than they did on the prior question. Among females the results are quite similar across questions. The 8th grade females show no decline, the 10th grade females a modest decline, and the 12th grade females some decline on the long-term question (though not much decline recently).

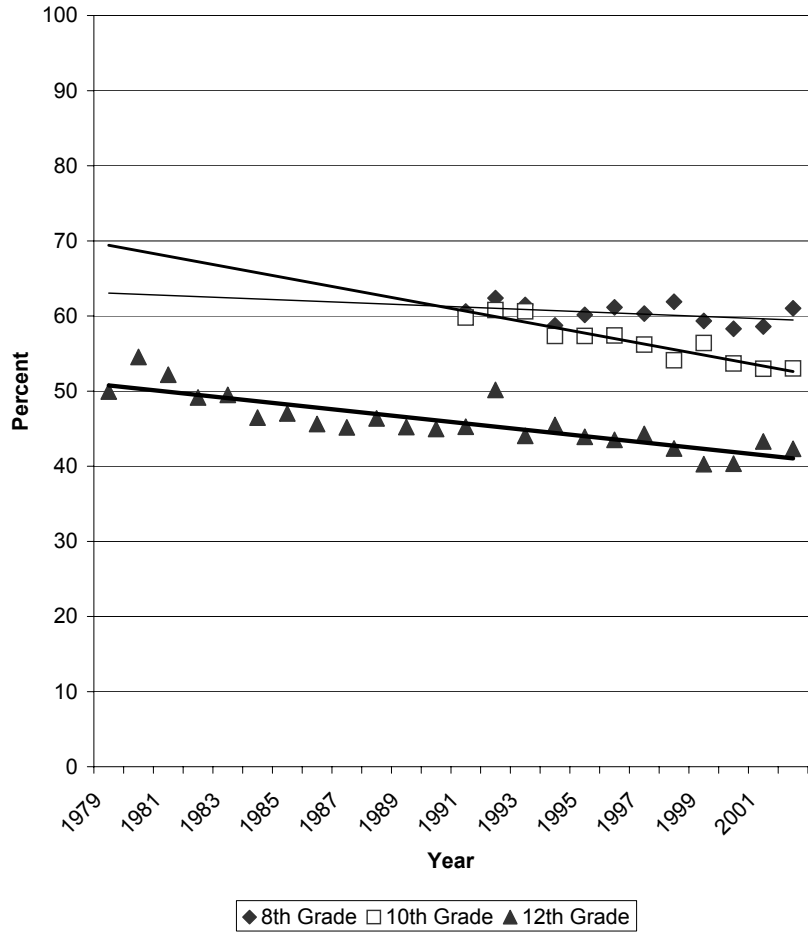
In general, boys report higher rates of getting vigorous exercise on both of these questions than do girls in the same grade. And substantially fewer 12th grade students report vigorous exercise than 10th grade students, who in turn have lower reported rates than 8th grade students. It thus appears that exercise declines with age, particularly toward the end of the high school years.

Still a third question asks students to what extent they have participated in school athletic teams in the past year—one obvious means by which they might be getting exercise. Figure 8 gives the proportions saying they have done so “to a considerable extent” or “to a great extent.” It shows a quite different pattern than the first two questions, with little or no change occurring among the boys in any grade, and a steady *increase* occurring among the girls in all grades. Indeed, by 2002 the gender differences almost have been eliminated in grades 8 and 10, but they remain in grade 12. These changes have had the effect of narrowing the gender gap on this dimension but certainly not eliminating it.

It appears, then, that the decline in boys’ overall exercise levels is not due to fewer of them being on school athletic teams, because there has been very little change in such participation. On the other hand, girls have been able to hold up their overall exercise levels at least in part through an increasing proportion of them participating on organized school teams. Their increased level of participation in organized sports no doubt is in part attributable to the effects of Title IX.

FIGURE 6

**Trends in Percent Who Exercise Vigorously
"Nearly Every Day" or More Often:
Males in Grades 8, 10, and 12**



**Trends in Percent Who Exercise Vigorously
"Nearly Every Day" or More Often:
Females in Grades 8, 10, and 12**

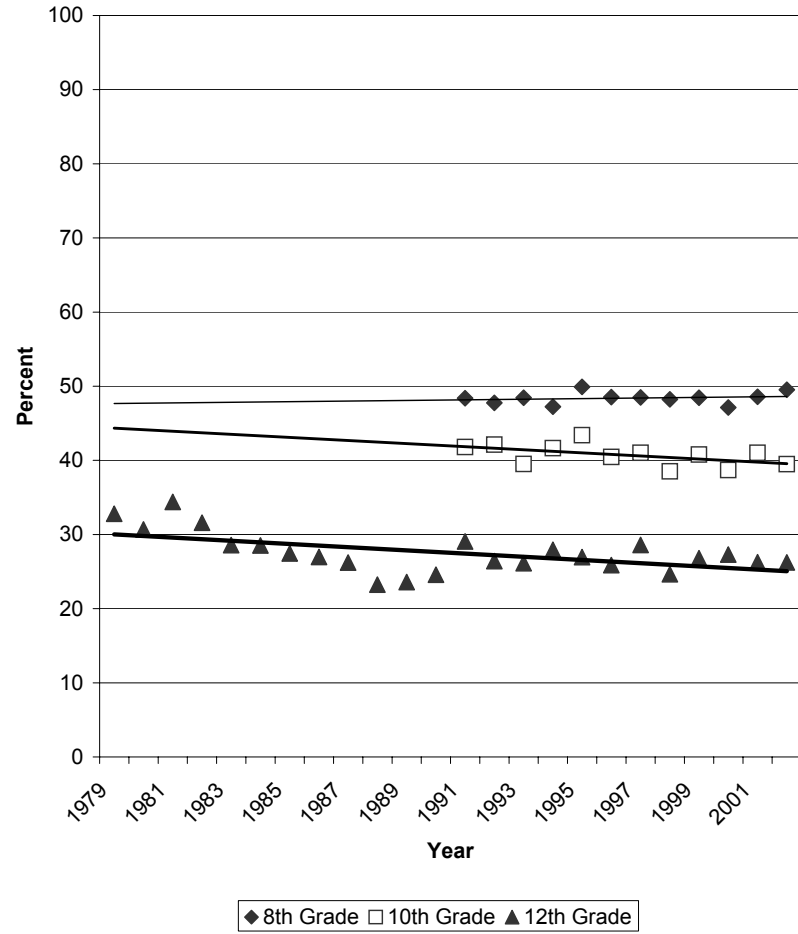
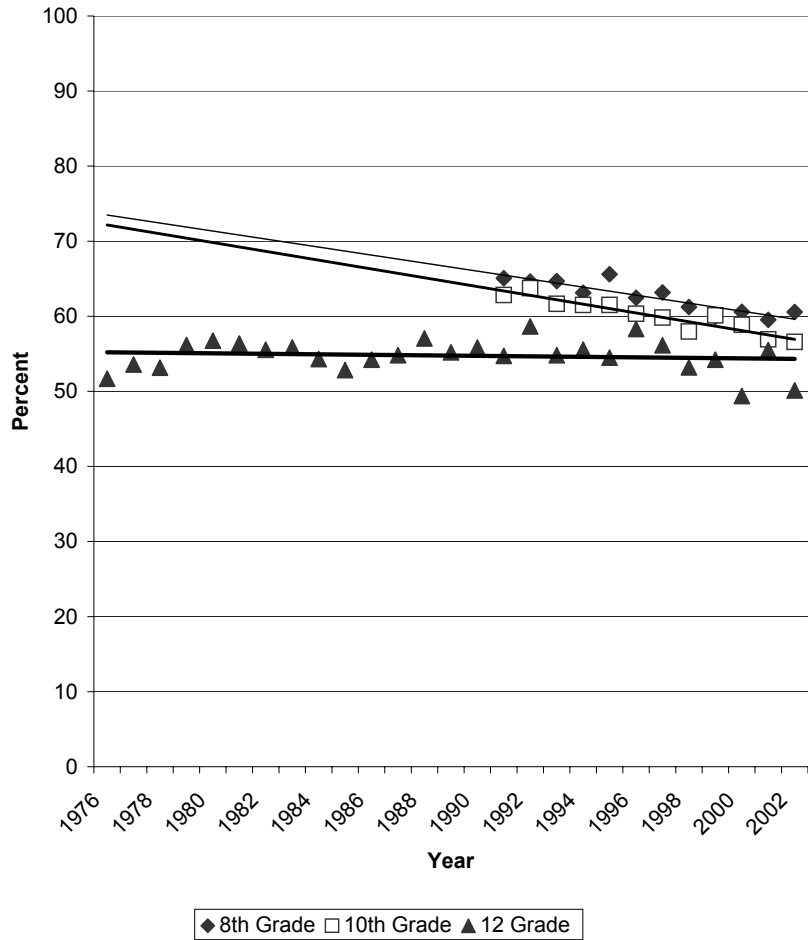


FIGURE 7

**Trends in Percent Who Participate in Sports, Athletics, or Exercise "Almost Every Day":
Males in Grades 8, 10, and 12**



**Trends in Percent Who Participate in Sports, Athletics, or Exercise "Almost Every Day":
Females in Grades 8, 10, and 12**

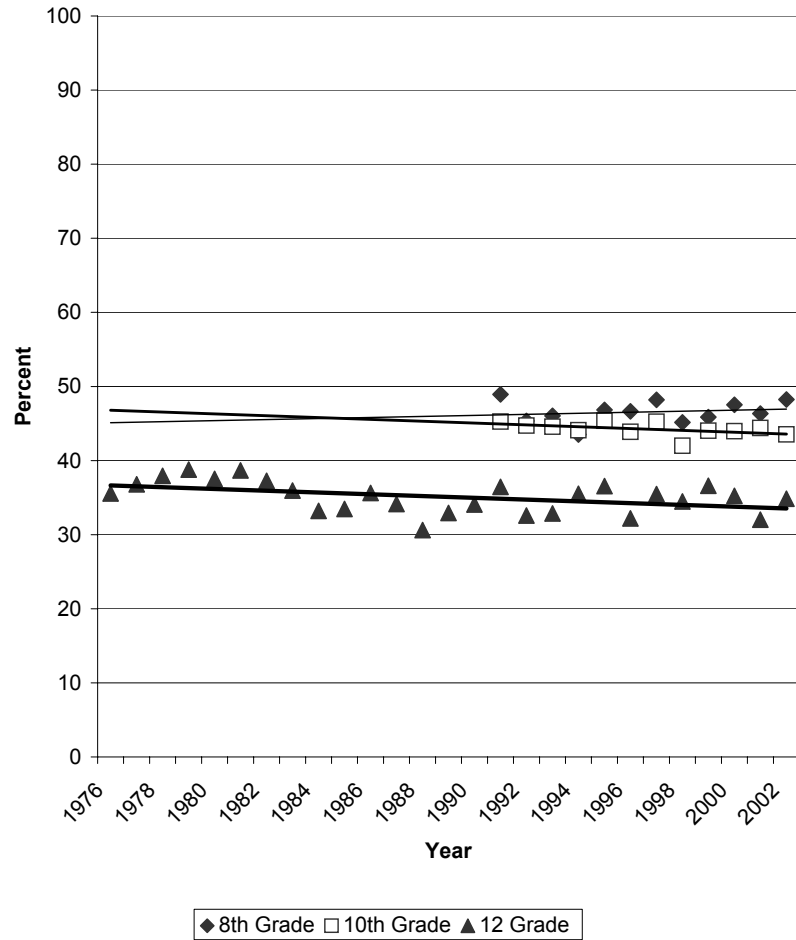
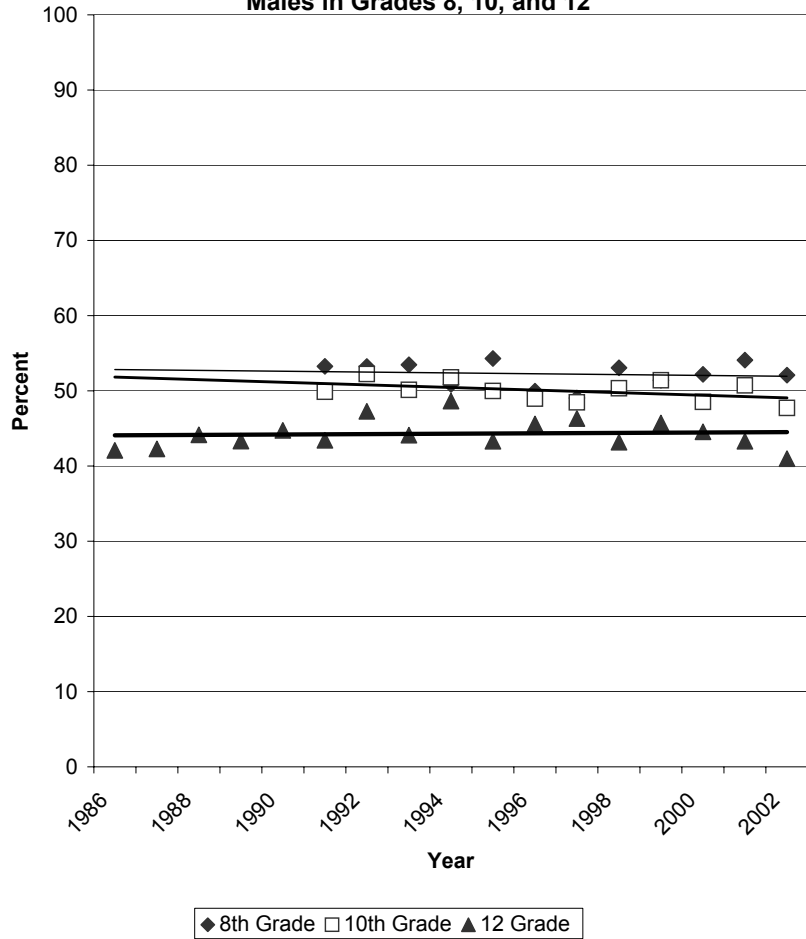
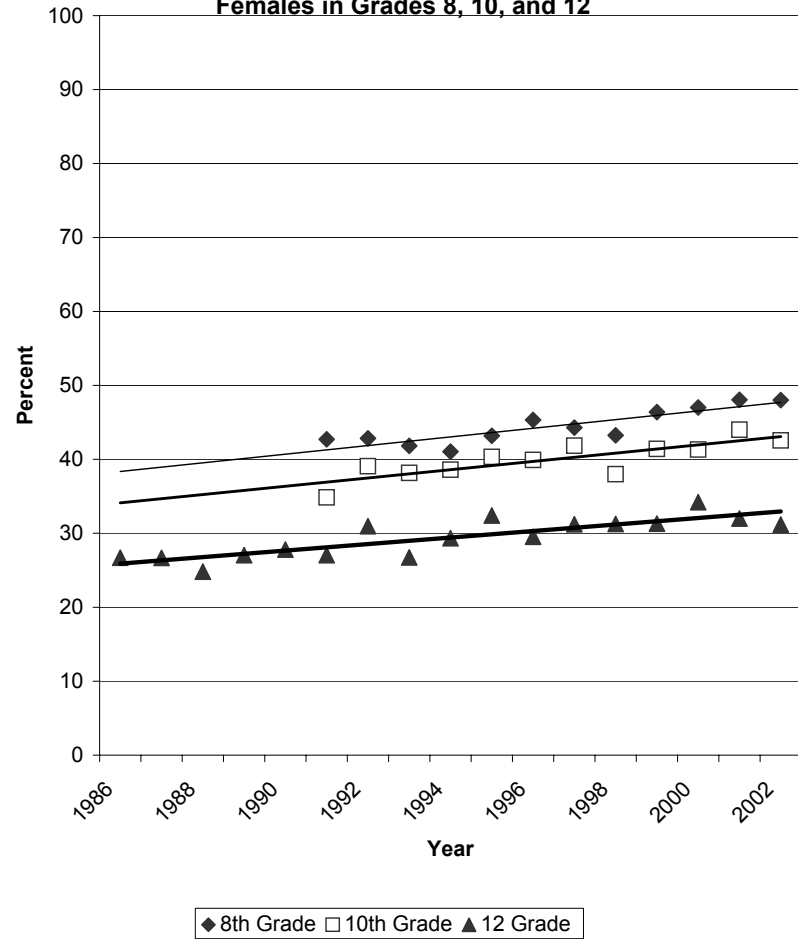


FIGURE 8

**Trends in Percent Who Participate on a School Athletic Team to a "Considerable" or "Great" Extent During the Past Year:
Males in Grades 8, 10, and 12**



**Trends in Percent Who Participate on a School Athletic Team to a "Considerable" or "Great" Extent During the Past Year:
Females in Grades 8, 10, and 12**



Dietary Habits

Unfortunately, the MTF study does not include any questions that would serve to measure total caloric intake, amount of food ingested, or frequency of binge eating. The primary measures available are: frequency of eating breakfast, frequency of eating fruit, and frequency of eating green vegetables. These questions were included as general indicators of healthy lifestyle and, more specifically, of healthy eating habits. All three have been included in the questionnaires since 1979 for 12th graders and since 1991 for 8th and 10th graders. The answer scale is as follows: “never,” “seldom,” “sometimes,” “most days,” “nearly every day,” and “every day.”

All three of these indicators show a disturbing degree of degradation of healthy eating habits at the high school level, that is, among 10th and 12th graders. The frequency of eating breakfast (Figure 9) has declined steadily among 10th and 12th grade boys and girls. (In general, girls have had a lower frequency of eating breakfast than boys; and younger students are more likely to eat breakfast than older ones, especially among boys.) However, there has been no such decline among 8th grade girls and less among the 8th grade boys than is observed in the upper grades.

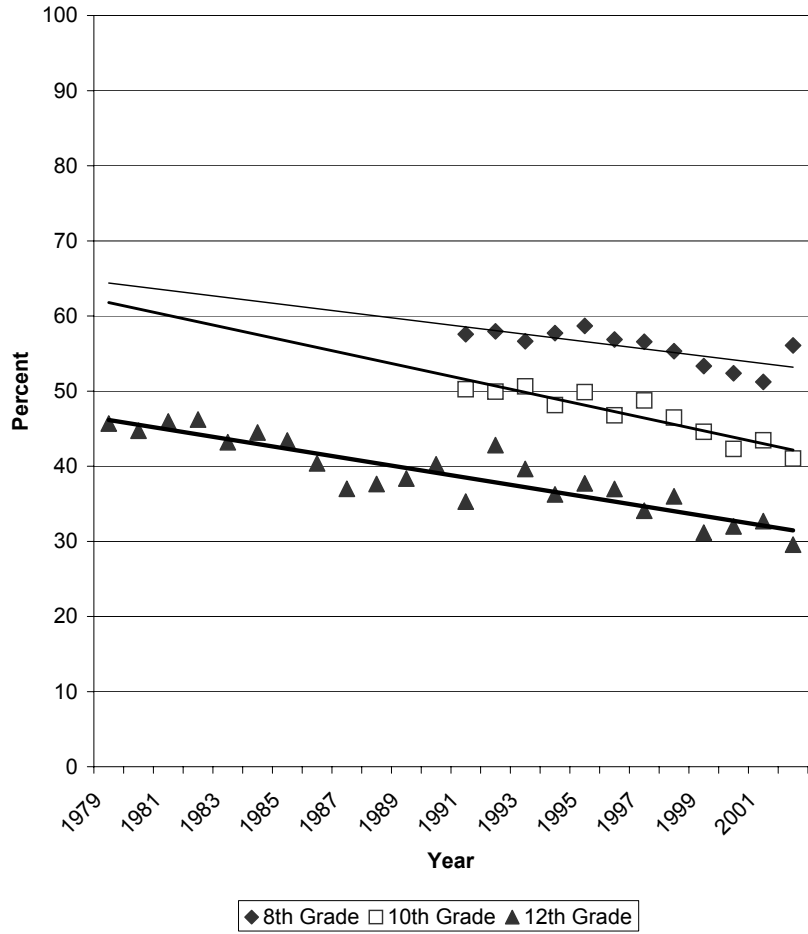
The frequency of eating green vegetables (Figure 10) declined quite sharply among both 12th grade boys and girls until the early 1990s, when the decline seemed to slow considerably. At 10th grade both boys and girls show recent declines, though they are sharper among the boys. Only at 8th grade is there little evidence of a decline, perhaps reflecting greater dietary control by parents of younger students.

The frequency of eating fruit almost every day (Figure 11) has shown some long-term decline among both 12th grade boys and girls—on the order of a 12-percentage-point drop over a 16-year interval. Again, both 8th grade boys and girls have shown little or no net decline over the 11-year interval for which data are available, but 10th grade girls show some decline though their male counterparts do not. Actually the data from girls at all grade levels and from the 8th grade boys suggest some increase in the frequency of eating fruit in the early 1990s followed by a downturn beginning in the last half of the 1990s that offset most or all of the gains.

Insofar as these three variables can be taken as indicators of more general dietary practices, it would seem that the degradation of healthful eating habits very likely has played a contributory role in the increasing amount of obesity found among American adolescents. It should be noted again that all three healthy dietary practices are found most frequently among the 8th graders and least frequently among the 12th graders, suggesting that as the influence of parents on these practices decline as their children grow older, the practices tend to become less healthy.

FIGURE 9

**Trends in Frequency of Eating Breakfast
"Nearly Every Day" or More:
Males in Grades 8, 10, and 12**



**Trends in Frequency of Eating Breakfast
"Nearly Every Day" or More:
Females in Grades 8, 10, and 12**

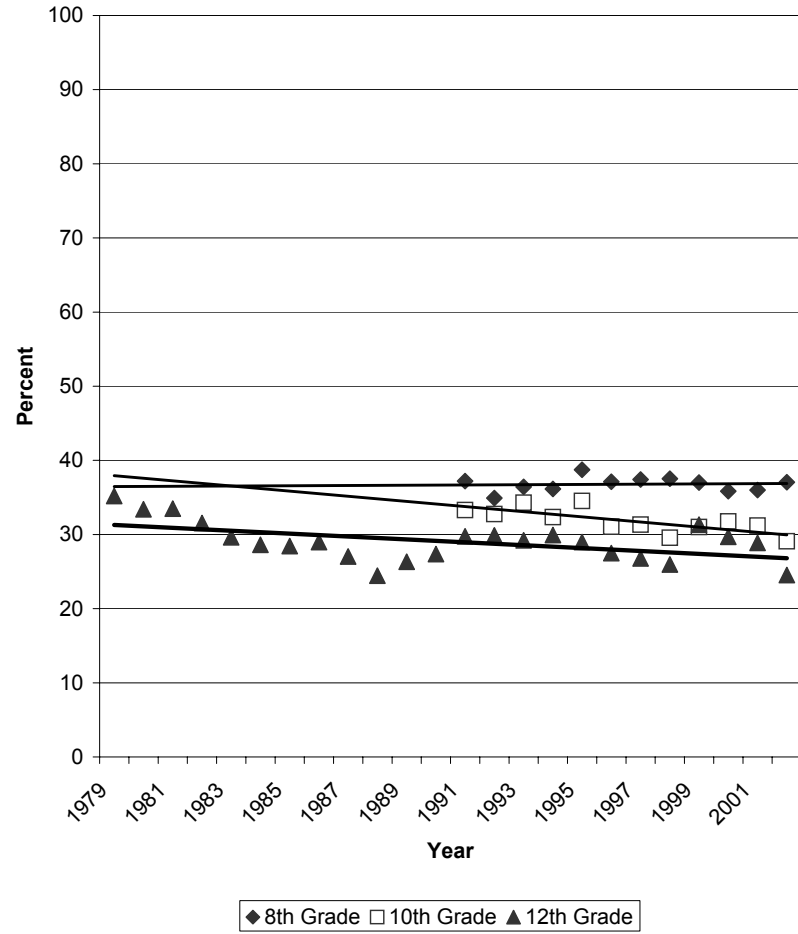
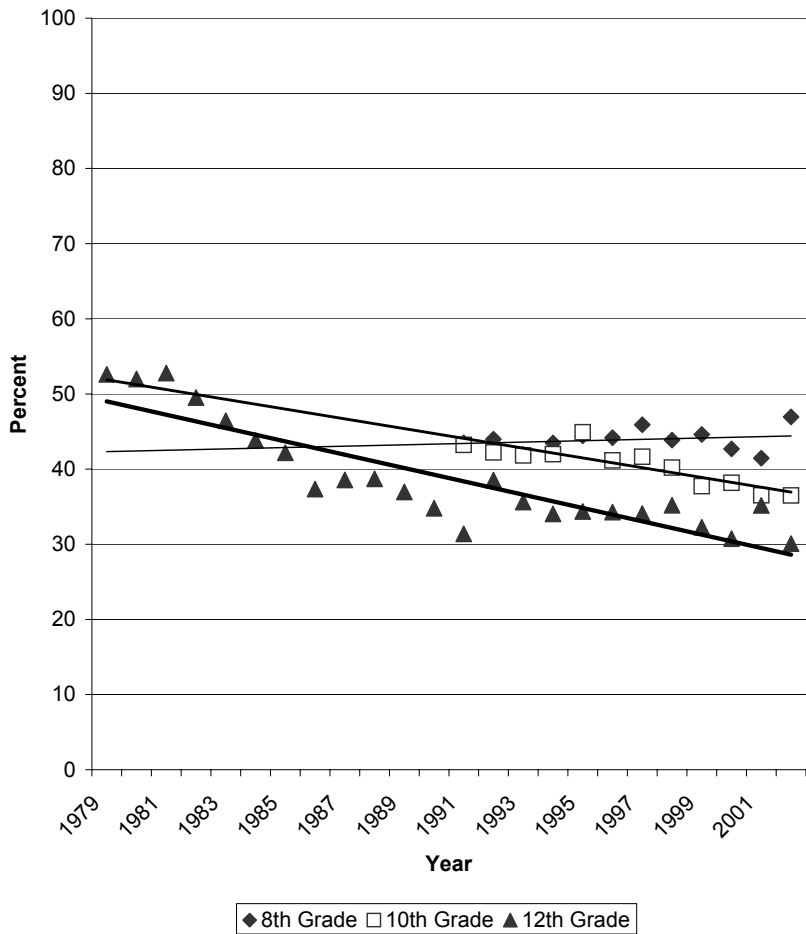


FIGURE 10

**Trends in Frequency of Eating Green Vegetables
"Nearly Every Day" or More:
Males in Grades 8, 10, and 12**



**Trends in Frequency of Eating Green Vegetables
"Nearly Every Day" or More:
Females in Grades 8, 10, and 12**

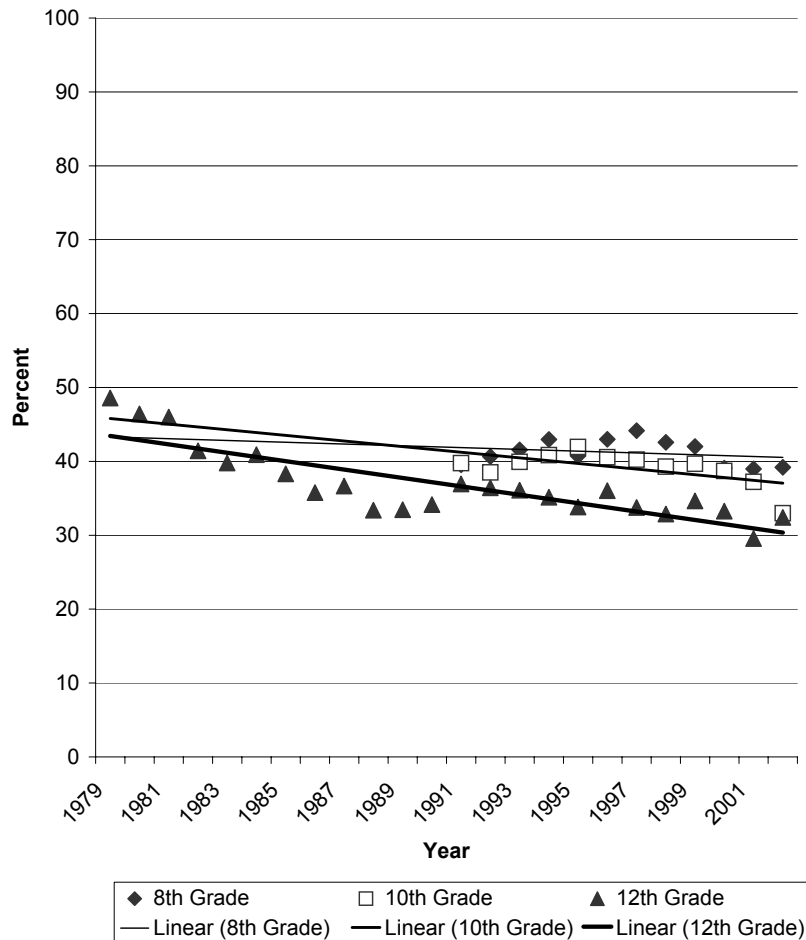
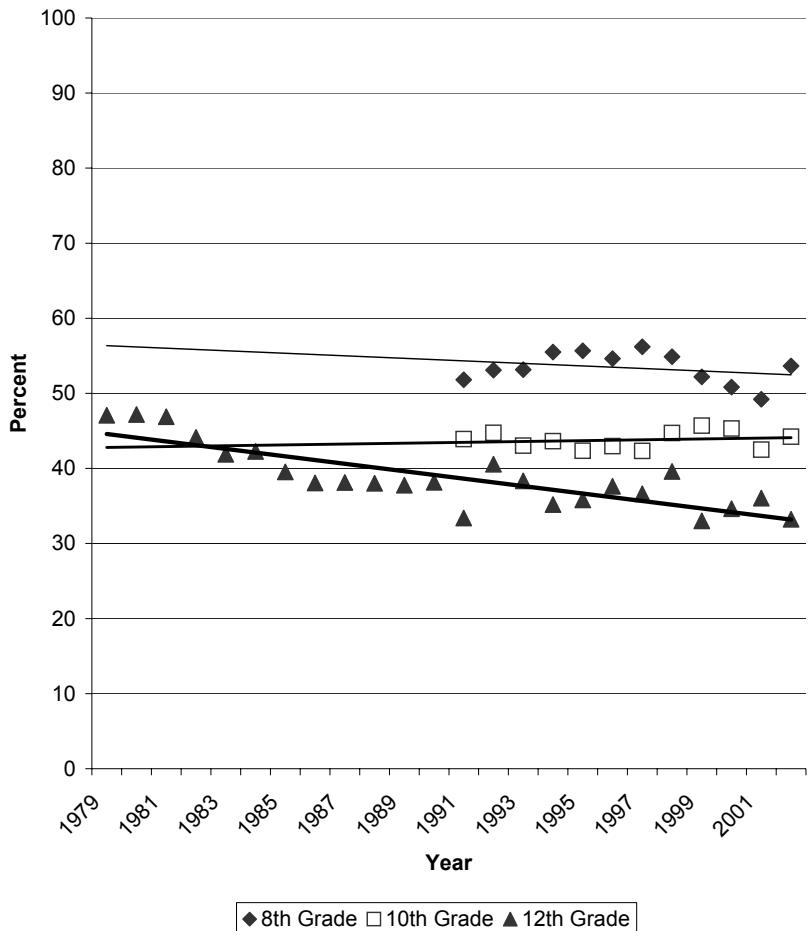
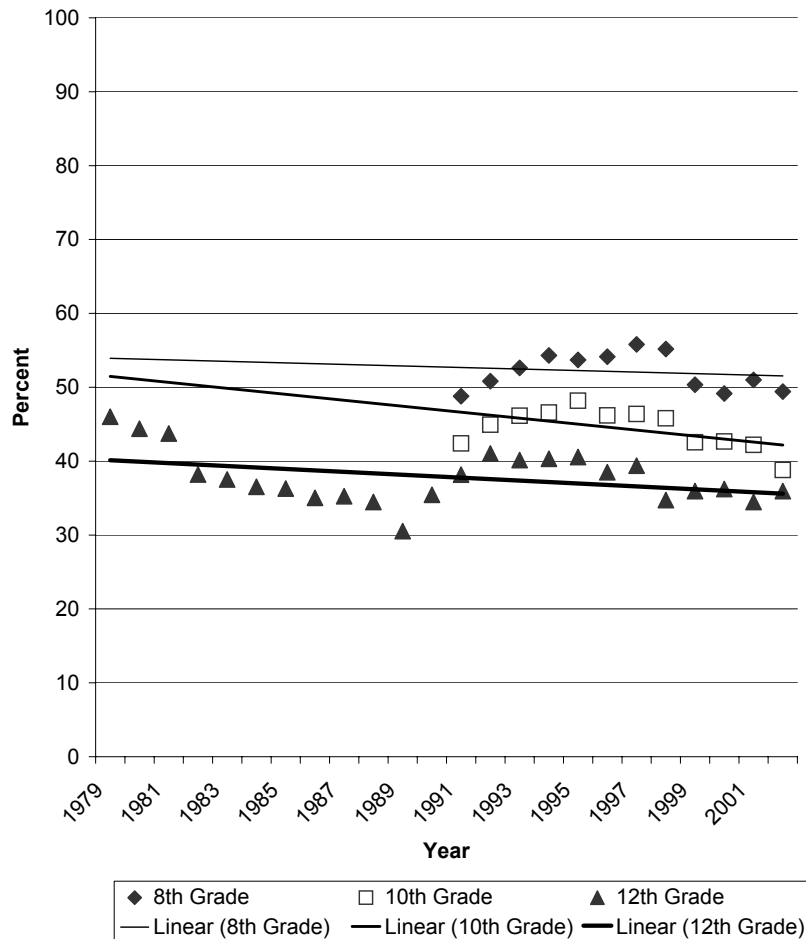


FIGURE 11

**Trends in Frequency of Eating Fruit
"Nearly Every Day" or More:
Males in Grades 8, 10, and 12**



**Trends in Frequency of Eating Fruit
"Nearly Every Day" or More:
Females in Grades 8, 10, and 12**



Sleep Habits

Two questions about sleep habits also have been included in the study since 1979 in grade 12 and since 1991 in the two lower grades. The first asks, “How often do you get at least seven hours of sleep?” The second asks for a judgment: “How often do you get less sleep than you think you should?” Both of these questions use the same answer scale as the dietary questions, ranging from “never” to “every day.”

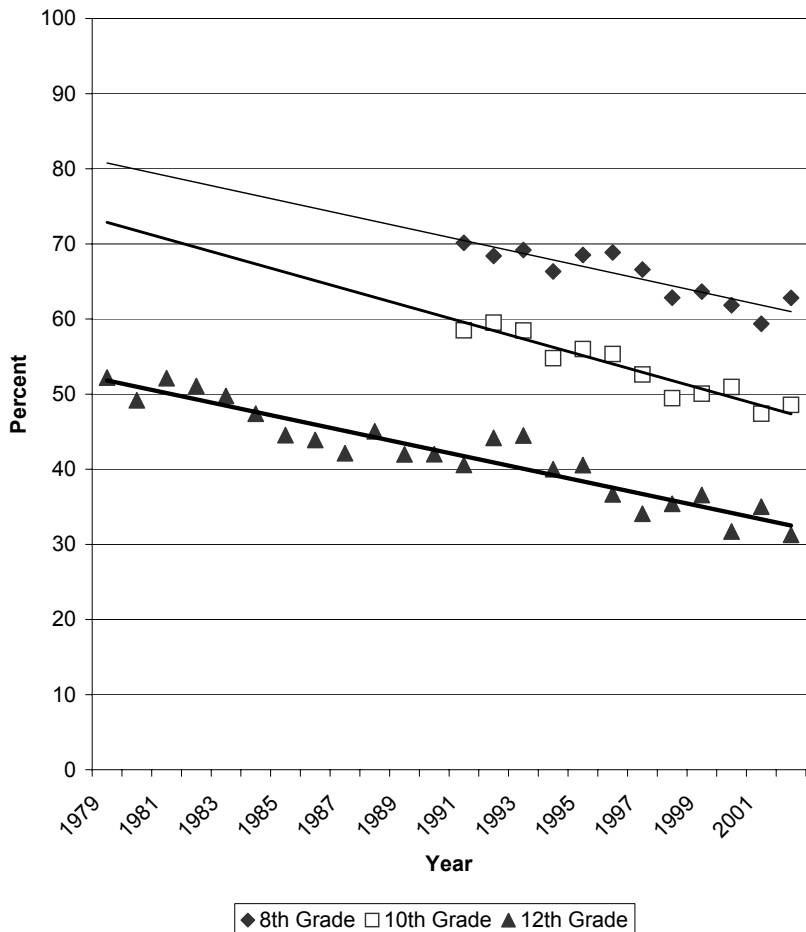
The results of these questions are presented in Figures 12 and 13, and they paint quite a dramatic picture. Clearly there has been an appreciable decline in the amount of sleep that American adolescents get. Among 12th grade boys, the proportion saying that they get at least 7 hours of sleep “nearly every day” or “every day” has fallen by 40% since 1979, from 52.2% to 31.3%. There has been an even larger drop of 56% among 12th grade girls, with 46.9% in 1979 versus 20.5% in 2002 saying that they get at least 7 hours of sleep nearly every day or every day. Furthermore, both genders in both other grades (8 and 10) show parallel decreases (Figure 12). Clearly the younger students get considerably more sleep than their older counterparts, but the sharp decline in reported duration of sleep is occurring across all three grades.

Figure 13 shows that an increasing proportion of students themselves judge the amount of sleep that they are getting to be inadequate. Asked “How often do you get less sleep than you think you should?” nearly 40% of both genders in 12th grade say that they do not get enough sleep “nearly every day” or “every day.” This is about double the proportion who said the same in the 1979 survey of 12th graders. Consistent with the differences in sleep that students say they actually get, the proportion who say that they get less than they should is higher at higher grade levels.

These are extraordinary changes in sleep habits, of importance in their own right, but also perhaps of importance in how they relate to increasing overweight among adolescents. Being up longer portions of the day, and very likely evening, provides more opportunity for eating (Squires, 2002). And being more tired may provide greater motivation for eating in order to try to get more energy. Other physiological factors are also possibly involved (Sekine et al., 2002). While these are simply hypotheses at this stage, we think them to be particularly interesting ones.

FIGURE 12

**Trends in Percent Who Get 7 Hours of Sleep
"Nearly Every Day" or More Often:
Males in Grades 8, 10, and 12**



**Trends in Percent Who Get 7 Hours of Sleep
"Nearly Every Day" or More Often:
Females in Grades 8, 10, and 12**

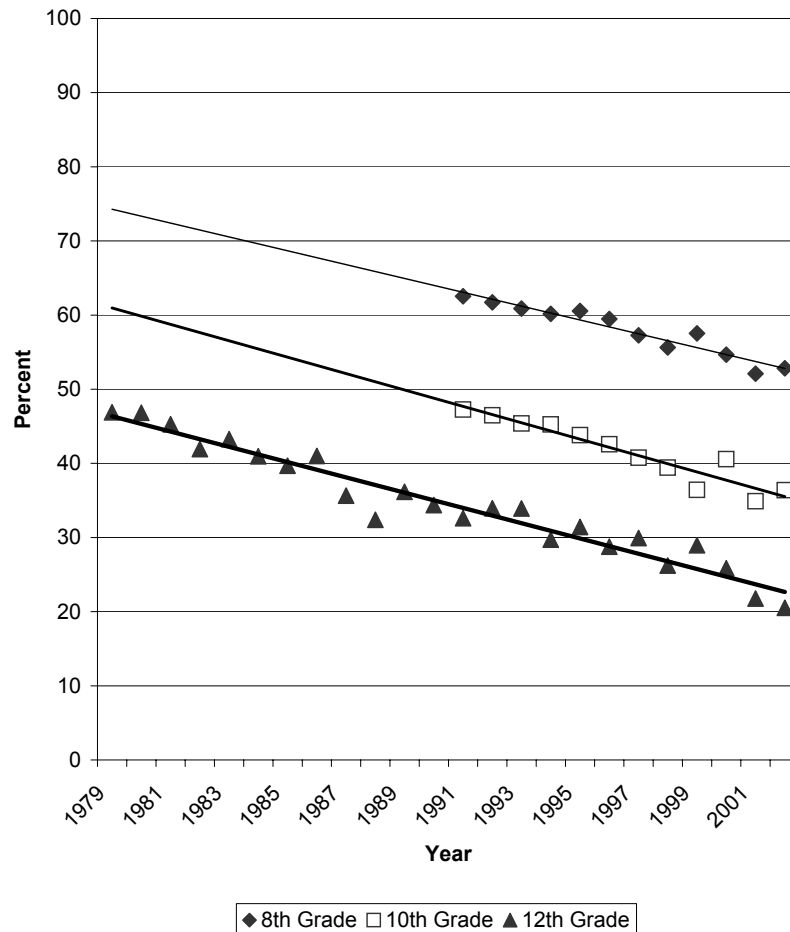
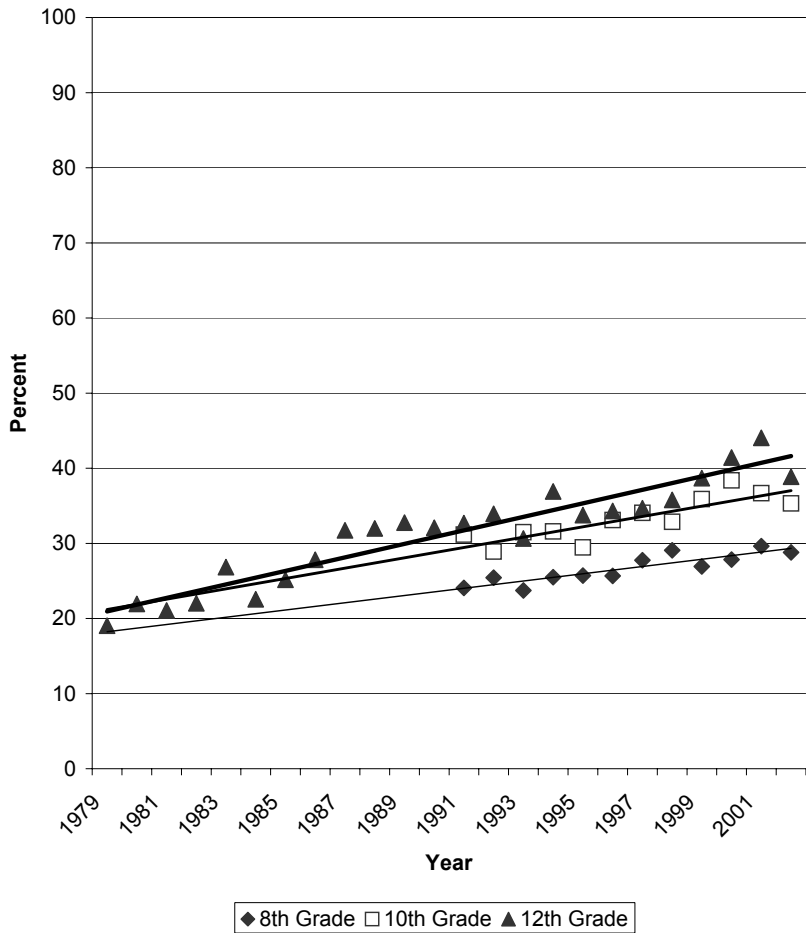
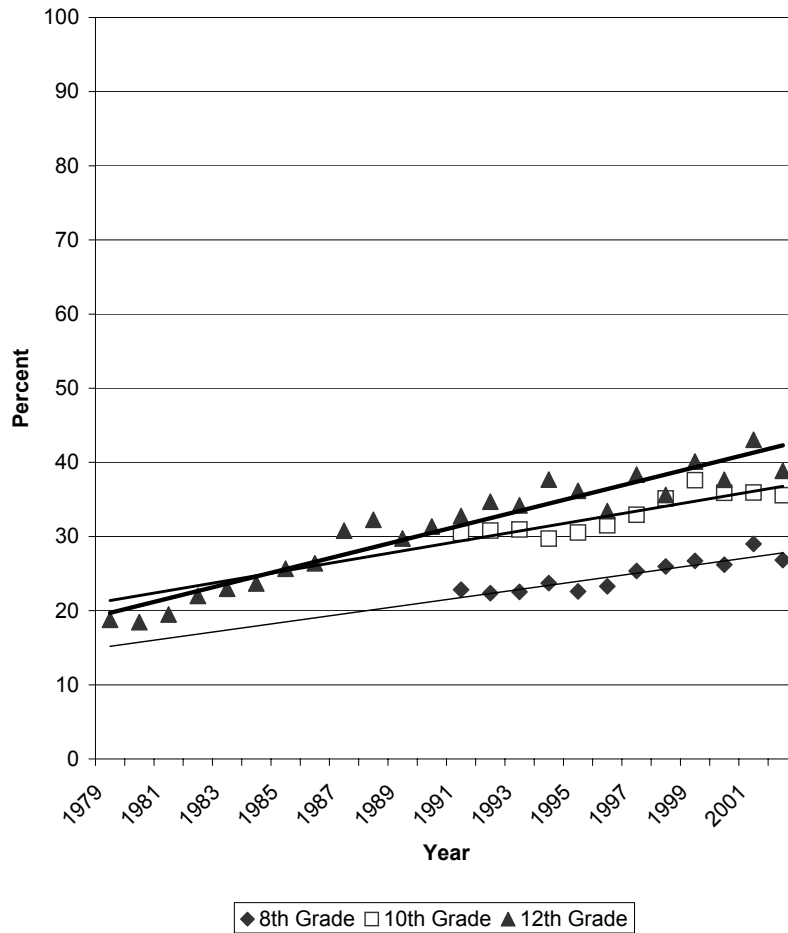


FIGURE 13

**Trends in Percent Who Get Less Sleep Than They Should "Nearly Every Day" or More Often:
Males in Grades 8, 10, and 12**



**Trends in Percent Who Get Less Sleep Than They Should "Nearly Every Day" or More Often:
Females in Grades 8, 10, and 12**



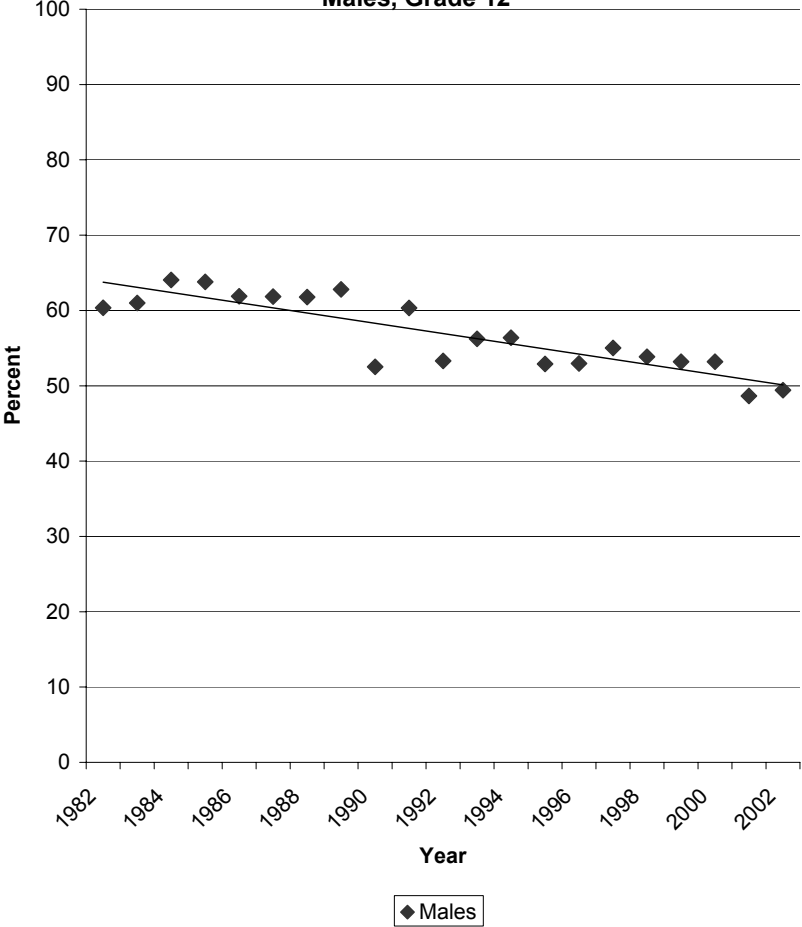
General Health Assessment

With more students carrying excess weight and substantially fewer getting adequate sleep, one might well imagine that they are feeling less healthy. A single question was included in the 12th grade questionnaire only, beginning in 1982, that asks respondents to rate their physical health over the past year relative to others their age. (The full text of the question may be found in Appendix A.) While in principle, the answers should always have a central tendency around “average,” since what is being requested is a relative position for a fixed time and population, in fact it may be treated by respondents more as an absolute scale. Figure 14 shows that among both 12th grade males and (particularly) among 12th grade females, there has been an appreciable decline in their ratings of their own health since 1982. The proportion of boys who rated their health as above average declined by 11 percentage points between 1982 and 2002, while the proportion of girls who rated their health as above average declined by 15 percentage points, and the girls started from a lower base.⁹ Whether or not their perceptions of having poorer health are accurate will have to be demonstrated by other studies; but just given some of the changes presented in this report, the shifting perception would seem to have a certain degree of face validity.

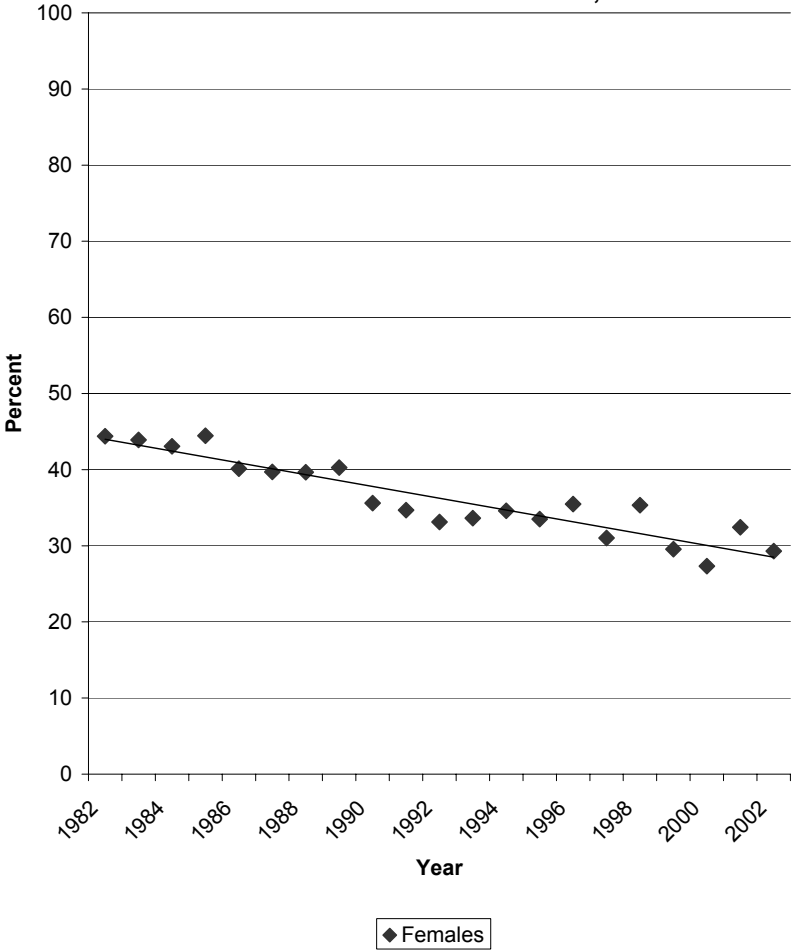
⁹Note that there is a substantial gender difference throughout the twenty-year period in the tendency to rate one’s own health as above average, with girls being considerably less likely to do so.

FIGURE 14

Trends in Respondents' Perception of their Health as "Somewhat Better" or "Much Better Than Average" Relative to Others in the Past Year: Males, Grade 12



Trends in Respondents' Perception of their Health as "Somewhat Better" or "Much Better Than Average" Relative to Others in the Past Year: Females, Grade 12



Sedentary Activities: Television Viewing and Computer Use

Sedentary activities are likely to burn the fewest calories per hour and may also be associated with an increased level of food consumption, so it is important to examine some of the major varieties of such activities. Perhaps the most obvious one is television viewing. Two questions were asked of 8th and 10th graders: “How much TV do you estimate that you watch on an average weekday?” and “How much television do you estimate that you watch on an average weekend (both Saturday and Sunday combined)?” For 12th graders, only the question about average weekday viewing was asked. The question about weekday viewing has been included in the MTF study from the beginning, so long-term trends are available.

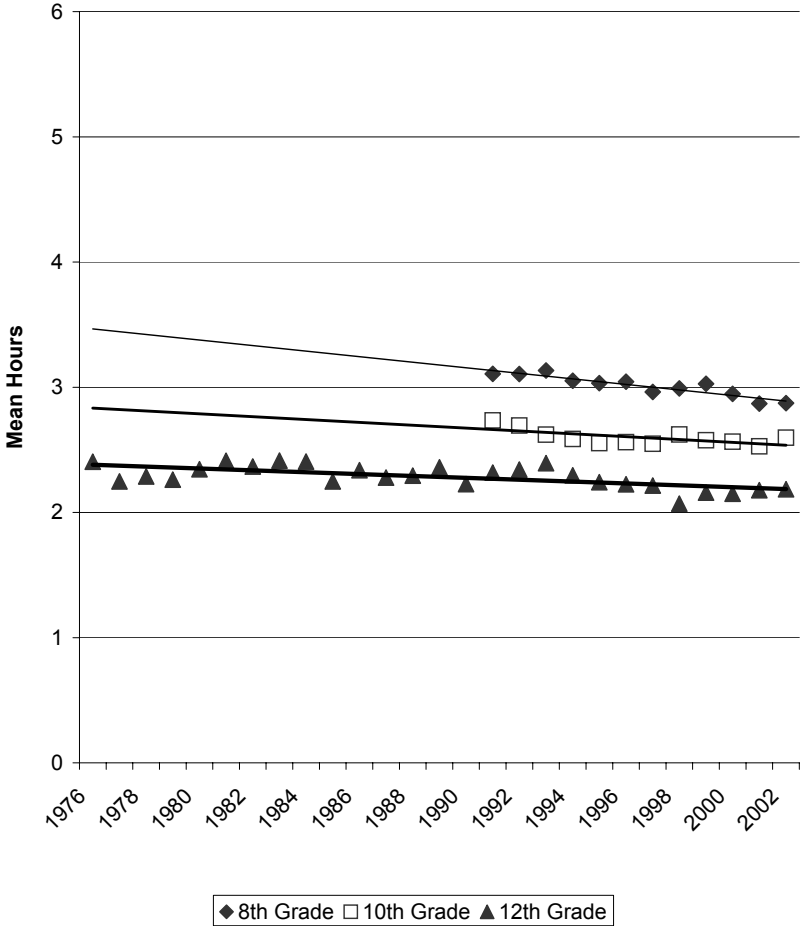
Figure 15 presents the trends in the mean number of reported hours of television viewing on an average weekday, for both genders in all three grades. Perhaps contrary to conventional wisdom, the average amount of television consumed by American teens has been declining gradually and for quite some time. In general, girls report less television viewing than boys in the same grade, and their drop-off in viewing has been somewhat sharper; but all groups show a decline. Figure 16 gives the trends in the number of hours spent on television viewing on the weekend (defined as Saturday and Sunday). Available for only 8th and 10th graders, it also shows a gradual decline across time. These findings certainly suggest that changes in time spent on this major sedentary activity cannot explain the upward trends in obesity among adolescents during this particular historical period, because it is trending in the wrong direction to do so.¹⁰ It would appear that the impact of *changes* in the amount of television viewing on adolescents’ weight problems already had run its course by the mid-1970s. That is not to say that television viewing is not a contributory factor, but rather that it is not an increasing contributing factor.

If adolescents are getting less sleep and simultaneously devoting less time to watching television, to what other activities might they be devoting more time? One serious candidate, it seems, would be time spent on the computer. Although the MTF study obtains estimates of time of work and school work spent on the computer, we believe it would be difficult to determine whether changes in these activities really represent changes in the overall amount of sedentary activity, or simply the displacement of one type of sedentary activity with another. We believe the most relevant of the three questions for current purposes is the students’ estimate of time spent on the computer doing activities other than school work or work on a job. Figure 17 provides that information for just the past five-year interval, because the question was first introduced in 1997. It shows a fairly sharp increase in mean hours spent per week on the computer on things other than school or a job. However, it must be recognized that these are weekly, not daily figures. The mean hours spent per day amounts to just under one for males and somewhat less than that for females, if we divide the weekly average by seven. However, it may be that the average is considerably higher for a sizeable segment of these students and that a number of others have zero or negligible usage. Therefore, working on the computer—no doubt including surfing the Web—is a rapidly increasing time investment for American adolescents; and males do more of it than do girls at each grade level.

¹⁰Of course, there may be qualitative changes in the information that is received from television that have the effect of encouraging greater consumption of foods and beverages, particularly ones that are high in calories and/or low in nutritional value.

FIGURE 15

**Trends in Mean Hours of Television Viewing on an Average Weekday:
Males in Grades 8, 10, and 12**



**Trends in Mean Hours of Television Viewing on an Average Weekday:
Females in Grades 8, 10, and 12**

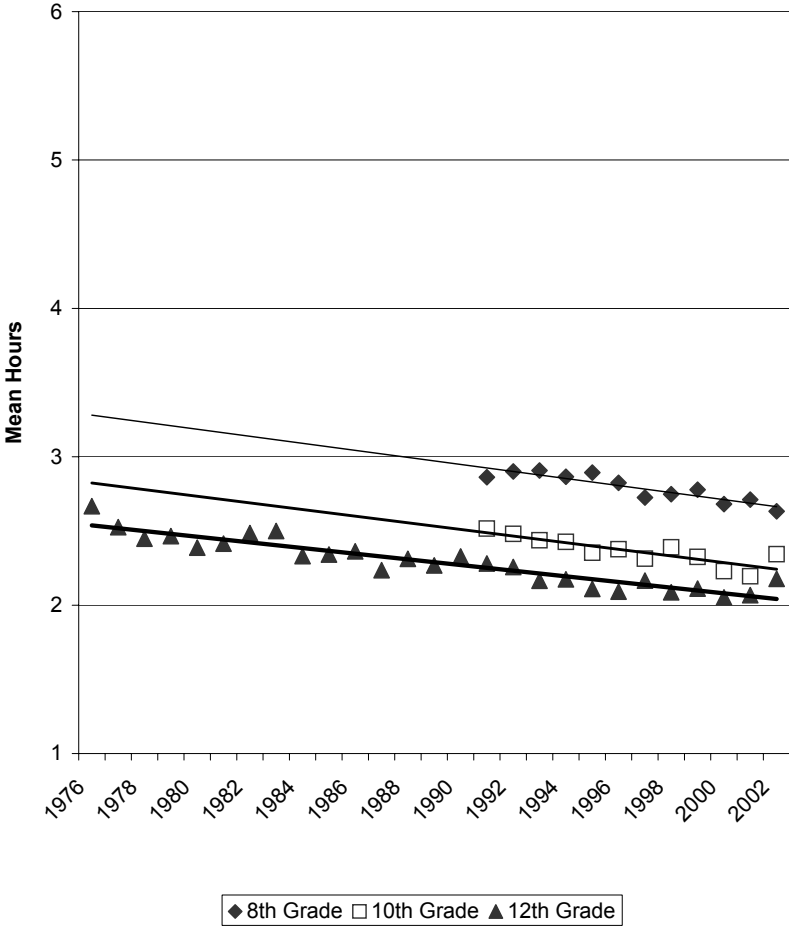
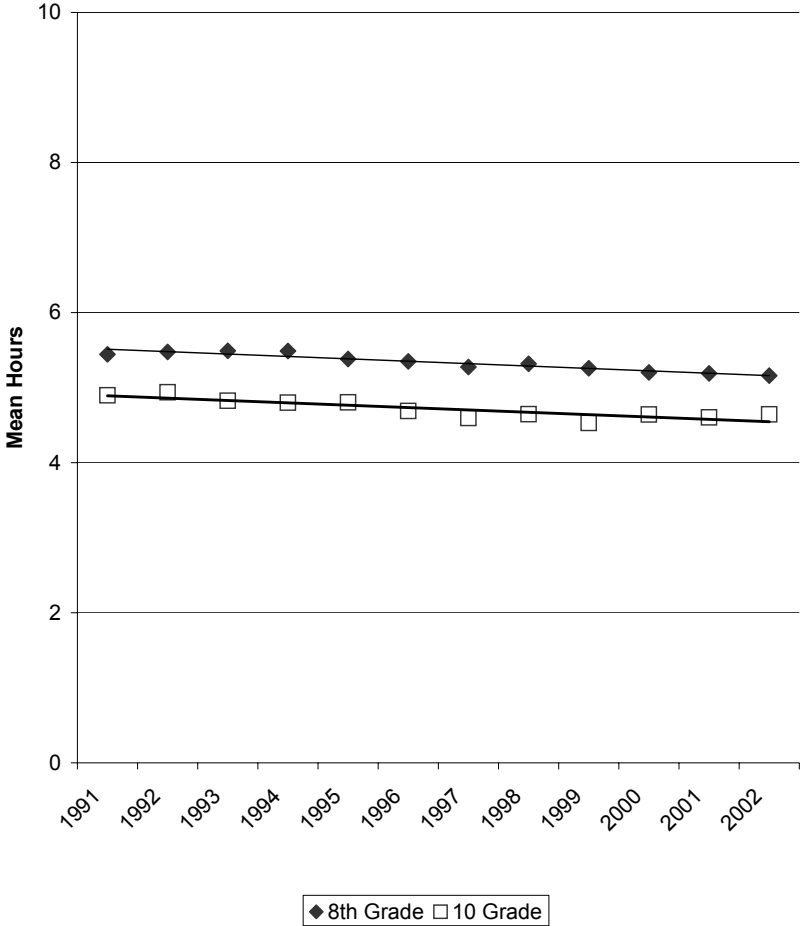


FIGURE 16

**Trends in Mean Hours of Television Viewing on the Weekend:
Males in Grades 8 and 10**



**Trends in Mean Hours of Television Viewing on the Weekend:
Females in Grades 8 and 10**

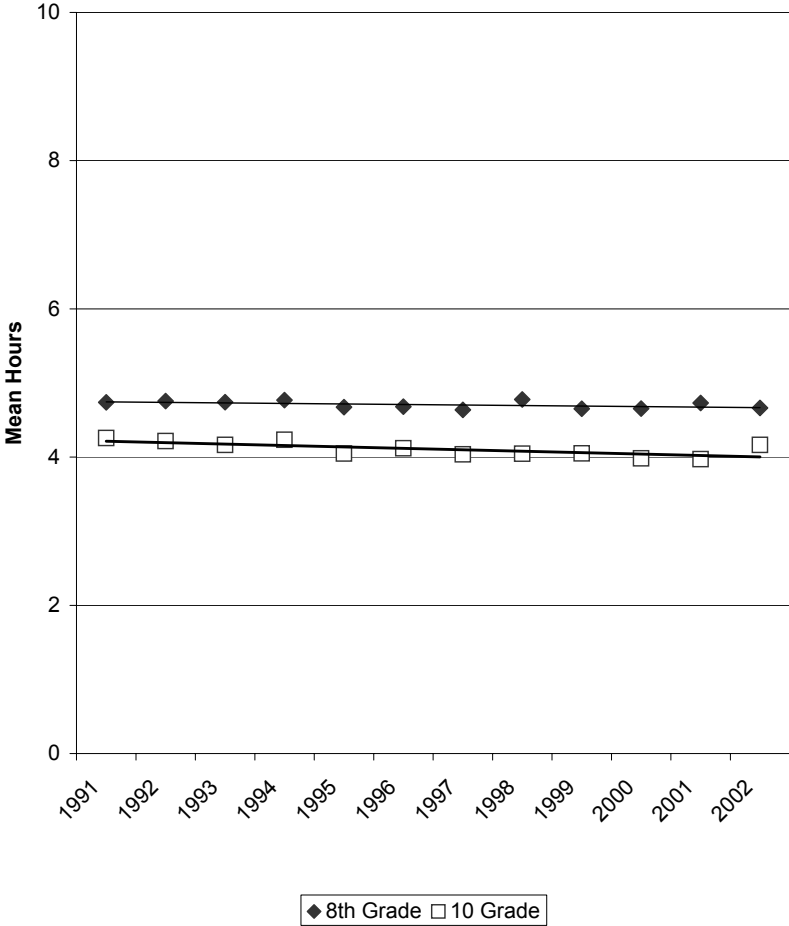
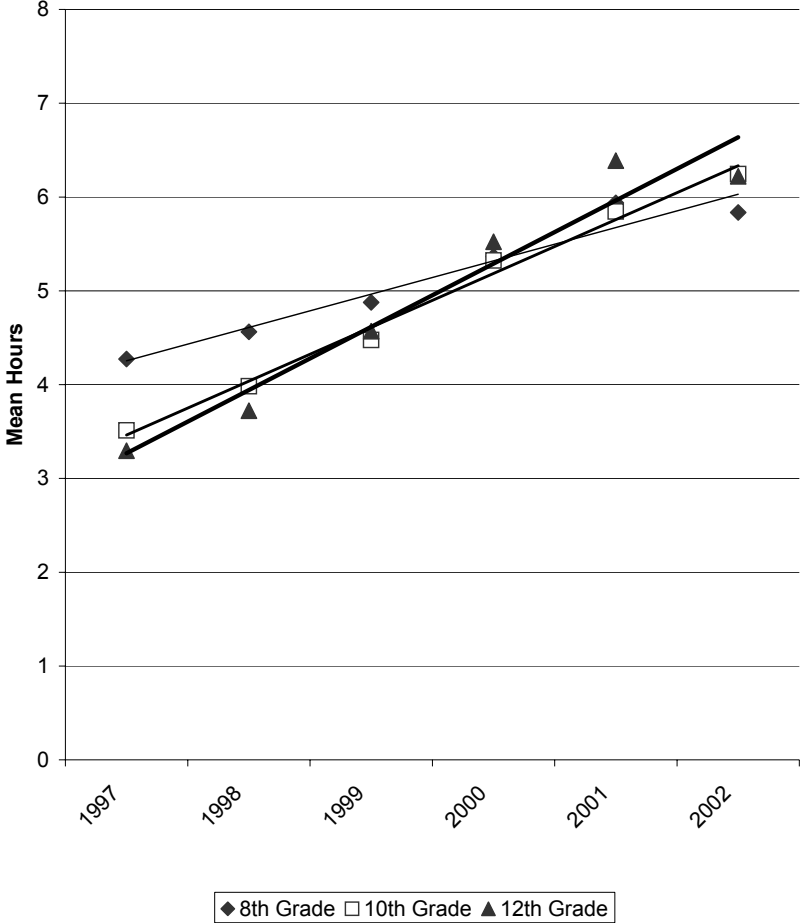
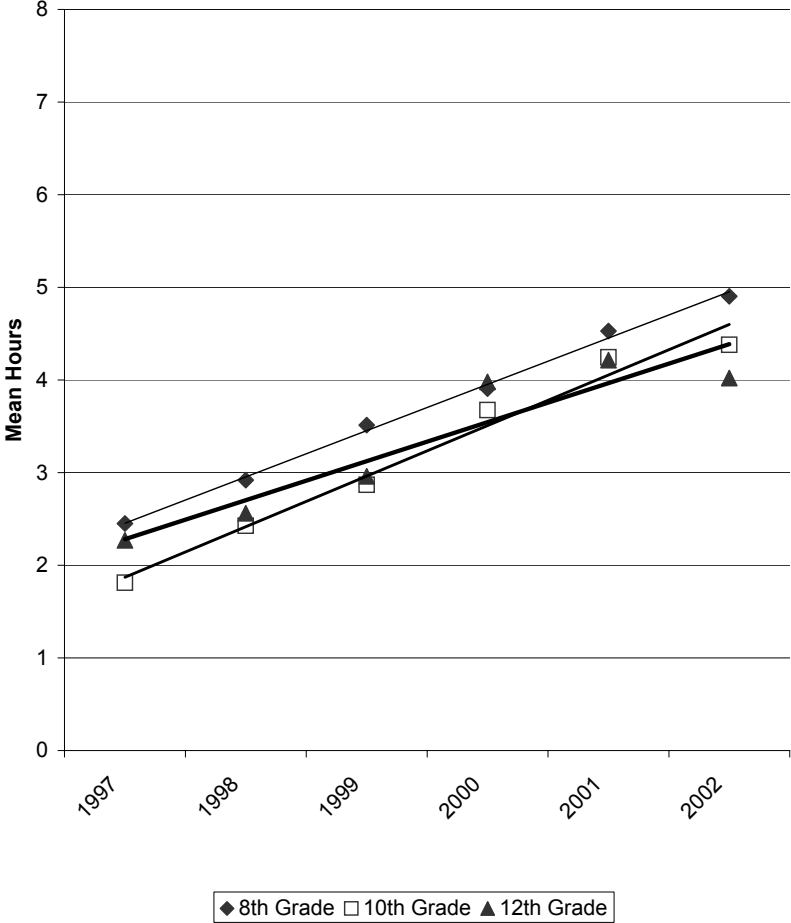


FIGURE 17

**Trends in Mean Hours per Week of Computer Use, Not for School or Work:
Males in Grades 8, 10, and 12**



**Trends in Mean Hours per Week of Computer Use, Not for School or Work:
Females in Grades 8, 10, and 12**



SUMMARY AND CONCLUSIONS

This examination of changes in the weight of young Americans and in a range of behaviors that may account for ongoing changes in their average weight has produced a number of interesting, and at times surprising, findings. We have documented that a substantial increase in weight has been taking place over nearly the past three decades among American adolescents and without any compensating increase in average heights to speak of. Thus the proportions of adolescents falling into the problematic categories of being “overweight” or (euphemistically speaking) “at risk for overweight” have been rising quite dramatically. Strikingly, the proportion of 12th grade boys who meet the CDC’s definition of being “overweight” has risen from 3.3% in 1986 to 11.2% in 2002—a more than three-fold increase. Among 12th grade girls the increase has been from 1.9% in 1986 (which we judged to be a bit low in relation to the trend line, perhaps reflecting some sampling error) to 7.0% in 2002—again, a more than three-fold increase. (The trend line would suggest at least a two-fold increase among girls.)

If we sum across the two problem categories, using the national survey data from the 2002 Monitoring the Future surveys, we find that between a quarter and a third of the boys are overweight or at risk of it (23%, 32%, and 27% in grades 8, 10, and 12). Around a fifth to a quarter of the girls fall into these two categories (21%, 23%, and 20%, respectively).

The one encouraging sign for the future is that, among 8th grade girls only, there has been a leveling in their weight since about 1995. This may well have to do with the fact that they are getting increasing amounts of exercise in combination with the fact that there has been less erosion in eating habits among the 8th graders than among the older teens. (Girls in all grades are reporting a higher level of involvement in school sports, but the older girls are also showing increasingly unhealthy eating habits.)

Our search for possible explanations from trends in other behaviors also had some interesting results. The usual culprit, television viewing, did not show any increase during the time periods under study here. Indeed, it showed a gradual ongoing decline, so it is unlikely to explain the changes in overweight through any increase in this sedentary activity. It may, of course, have had an impact through its content—both in terms of advertising and program content—but these are not variables that MTF is well suited to address. One sedentary activity that *is* showing signs of rapid increase, however, is time spent on the computer. In fact, it may help to account for the dramatic decrease in sleep that we have found to be taking place among American adolescents.

The severe decline in the proportions of our adolescents getting enough sleep is particularly troublesome, since it seems likely to affect their performance in a number of tasks, as well as to affect their health and sense of well-being. In fact, we did find that a steadily declining proportion of both adolescent boys and girls are reporting their own health to be better than average. But, for the primary purpose of this report, which is to document changes in adolescent obesity and to offer possible explanations for the changes being observed in that outcome, the significance of the declining sleep finding may come in the form of showing that adolescents are spending more hours awake, when they can be eating. Further, they may be

using eating as a coping mechanism to try to fend off increasing feelings of tiredness. While only hypotheses at this point, we believe that they deserve serious examination.

Future Directions

This occasional paper is the first of what will be a number of investigations of the problem of obesity in adolescence. These efforts will emanate from the Youth, Education, and Society (YES) study and from the larger Bridging the Gap Initiative (BTG), of which YES is a part. We and our BTG colleagues at the University of Illinois at Chicago will collect data of relevance from both the schools and the communities from which future Monitoring the Future respondents are drawn. The purpose will be to determine what conditions, policies, and programs in these environments have an effect on the propensity of young people to become overweight. We are hopeful that we will be able to contribute both to the understanding of this problem, which is critical to the future health of the nation, and to the development of effective solutions.

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APPENDIX A
TEXT OF QUESTIONS AND ANSWERS

Mean Height in Inches

What is your current height (in feet and inches) without shoes?

8th/10th grades

1. 4'5" or less
2. 4'6"
3. 4'7"
4. 4'8"
5. 4'9"
6. 4'10"
7. 4'11"
8. 5'0"
9. 5'1"
10. 5'2"
11. 5'3"
12. 5'4"
13. 5'5"
14. 5'6"
15. 5'7"
16. 5'8"
17. 5'9"
18. 5'10"
19. 5'11"
20. 6'0"
21. 6'1"
22. 6'2"
23. 6'3" or more

12th grade

1. 4'10" or less
2. 4'11"
3. 5'0"
4. 5'1"
5. 5'2"
6. 5'3"
7. 5'4"
8. 5'5"
9. 5'6"
10. 5'7"
11. 5'8"
12. 5'9"
13. 5'10"
14. 5'11"
15. 6'0"
16. 6'1"
17. 6'2"
18. 6'3" or more

Mean Weight in Pounds

What is your current weight (in pounds) without shoes or clothing?

- | <u>8th/10th grades</u> | <u>12th grade</u> |
|--|------------------------------|
| 1. 80 lbs. or less | 1. 100 lbs. or less |
| 2. 81-85 | 2. 101-105 |
| 3. 86-90 | 3. 106-110 |
| 4. 91-95 | 4. 111-115 |
| 5. 96-100 | 5. 116-120 |
| 6. 101-105 | 6. 121-125 |
| 7. 106-110 | 7. 126-130 |
| 8. 111-115 | 8. 131-135 |
| 9. 116-120 | 9. 136-140 |
| 10. 121-125 | 10. 141-150 |
| 11. 126-130 | 11. 151-160 |
| 12. 131-135 | 12. 161-170 |
| 13. 136-140 | 13. 171-180 |
| 14. 141-150 | 14. 181-190 |
| 15. 151-160 | 15. 191-200 |
| 16. 161-170 | 16. 201-210 |
| 17. 171-180 | 17. 211-220 |
| 18. 181-190 | 18. 221 lbs. or more |
| 19. 191-200 | |
| 20. 201-210 | |
| 21. 211-220 | |
| 22. 221 lbs. or more | |

Body Mass Index

BMI = weight (kilograms) / height (meters)²

Vigorous Exercise

How often do you . . . Exercise vigorously (jogging, swimming, calisthenics, or any other active sports)?

1. Never
2. Seldom
3. Sometimes
4. Most days
5. Nearly every day
6. Every day

Participation in Sports, Athletics, or Exercise

The next questions ask about the kinds of things you might do. How often do you do each of the following? . . . Actively participate in sports, athletics or exercising

5. Almost every day
4. At least once a week
3. Once or twice a month
2. A few times a year
1. Never

Participation on a School Athletic Team

To what extent have you participated in the following school activities during this school year?
. . . athletic teams

1. Not at all
2. Slight
3. Moderate
4. Considerable
5. Great

Frequency of Eating Breakfast

How often do you . . . Eat breakfast?

1. Never
2. Seldom
3. Sometimes
4. Most days
5. Nearly every day
6. Every day

Frequency of Eating Green Vegetables

How often do you . . . Eat at least some green vegetables?

1. Never
2. Seldom
3. Sometimes
4. Most days
5. Nearly every day
6. Every day

Frequency of Eating Fruit

How often do you . . . Eat at least some fruit?

1. Never
2. Seldom
3. Sometimes
4. Most days
5. Nearly every day
6. Every day

Seven Hours of Sleep

How often do you . . . Get at least seven hours of sleep?

1. Never
2. Seldom
3. Sometimes
4. Most days
5. Nearly every day
6. Every day

Less Sleep Than Should

How often do you . . . Get less sleep than you think you should?

1. Never
2. Seldom
3. Sometimes
4. Most days
5. Nearly every day
6. Every day

Perceptions of Health Relative to Others in the Past Year

Overall, relative to other people your age, do you think your physical health over the past year has been . . .

1. Much poorer than average
2. Somewhat poorer than average
3. About average
4. Somewhat better than average
5. Much better than average

Mean Hours of Television Viewing on an Average Weekday

How much TV do you estimate you watch on an average WEEKDAY?

1. None
2. Half-hour or less
3. About one hour
4. About two hours
5. About three hours
6. About four hours
7. Five hours or more

Mean Hours of Television Viewing on the Weekend

How much TV do you estimate you watch on an average WEEKEND (both Saturday and Sunday combined)?

1. None
2. Less than 1 hour
3. 1-2 hours
4. 3-4 hours
5. 5-6 hours
6. 7-8 hours
7. 9 hours or more

Mean Hours per Week of Computer Use: Not for School or Work

About how many hours a week do you spend using a computer . . . doing other things?

1. None
2. Less than 1 hour
3. 1-2 hours
4. 3-5 hours
5. 6-9 hours
6. 10-19 hours
7. 20 or more

APPENDIX B

TREND TABLES

TABLE 1
Trends in Mean Height in Inches: 8th, 10th, and 12th Graders

Males

8th Grade			
	Mean Height	Std Dev	Wtd. N
1989			
1990			
1991	65.9	4.15	3406
1992	66.0	4.16	3285
1993	66.1	4.15	3448
1994	66.0	4.20	3196
1995	66.0	4.14	3080
1996	66.2	4.10	3342
1997	66.3	4.22	3286
1998	65.9	4.16	3337
1999	66.1	4.13	3220
2000	66.2	4.19	3171
2001	66.2	4.24	3002
2002	66.3	4.22	2907

Females

8th Grade			
	Mean Height	Std Dev	Wtd. N
1989			
1990			
1991	63.3	3.07	3559
1992	63.4	3.19	3714
1993	63.4	3.24	3695
1994	63.6	3.28	3552
1995	63.6	3.32	3361
1996	63.6	3.35	3544
1997	63.6	3.23	3695
1998	63.7	3.23	3582
1999	63.5	3.31	3600
2000	63.6	3.26	3427
2001	63.7	3.35	3463
2002	63.4	3.20	3330

10th Grade

	Mean Height	Std Dev	Wtd. N
1989			
1990			
1991	69.4	3.42	3406
1992	69.5	3.29	3285
1993	69.7	3.23	3448
1994	69.7	3.24	3196
1995	69.6	3.32	3080
1996	69.6	3.20	3342
1997	69.6	3.40	3286
1998	69.6	3.39	3337
1999	69.5	3.33	3220
2000	69.4	3.40	3171
2001	69.5	3.44	3002
2002	69.4	3.39	2907

10th Grade

	Mean Height	Std Dev	Wtd. N
1989			
1990			
1991	64.3	3.06	3434
1992	64.4	2.99	3301
1993	64.5	3.06	3470
1994	64.5	3.07	3539
1995	64.6	3.08	3730
1996	64.5	3.12	3437
1997	64.5	3.11	3627
1998	64.5	3.08	3469
1999	64.5	3.01	3295
2000	64.5	3.16	3282
2001	64.4	3.11	3340
2002	64.4	3.10	3354

TABLE 1 (cont.)

Males

Females

	12th Grade			12th Grade		
	Mean Height	Std Dev	Wtd. N	Mean Height	Std Dev	Wtd. N
1986	70.4	2.82	1267	64.8	2.66	1457
1987	70.3	2.92	1378	64.8	2.69	1514
1988	70.5	2.83	1375	64.8	2.73	1521
1989	70.2	2.89	1181	64.8	2.81	1293
1990	70.4	2.88	1067	64.5	2.75	1082
1991	70.3	2.84	1054	64.6	2.60	1086
1992	70.4	2.99	1015	64.9	2.71	1137
1993	70.5	2.82	1023	64.8	2.84	1188
1994	70.5	2.97	988	64.8	2.81	1142
1995	70.6	2.96	999	64.8	2.85	1121
1996	70.5	2.97	909	64.8	2.76	1032
1997	70.3	3.01	918	64.9	2.84	1093
1998	70.5	2.85	940	64.7	2.82	1056
1999	70.6	2.98	873	64.9	2.84	970
2000	70.8	2.78	815	64.9	2.78	844
2001	70.5	3.09	779	64.7	2.89	955
2002	70.5	3.00	793	64.8	2.74	967

TABLE 2
Trends in Mean Weight in Pounds: 8th, 10th, and 12th Graders

Males

8th Grade

	Mean Weight	Std Dev	Wtd. N
1989			
1990			
1991	128.4	28.15	3421
1992	130.5	28.83	3299
1993	130.4	29.69	3454
1994	130.6	28.66	3198
1995	132.1	29.88	3080
1996	133.4	30.49	3324
1997	131.9	30.32	3299
1998	133.3	31.22	3331
1999	133.5	30.86	3225
2000	134.9	31.97	3178
2001	136.0	33.40	2986
2002	134.3	31.94	2908

Females

8th Grade

	Mean Weight	Std Dev	Wtd. N
1989			
1990			
1991	116.6	21.00	3520
1992	118.1	23.03	3697
1993	118.6	22.86	3654
1994	120.6	24.37	3500
1995	121.2	25.08	3335
1996	120.1	24.21	3510
1997	118.9	23.63	3619
1998	119.4	23.85	3519
1999	120.0	24.95	3547
2000	120.9	25.42	3373
2001	120.4	25.88	3399
2002	120.6	25.99	3274

10th Grade

	Mean Weight	Std Dev	Wtd. N
1989			
1990			
1991	151.9	28.09	3156
1992	153.8	28.58	3000
1993	154.7	28.26	3221
1994	156.1	28.86	3374
1995	155.9	29.52	3604
1996	155.7	29.97	3214
1997	157.0	29.98	3178
1998	157.4	30.04	3102
1999	157.1	30.37	2881
2000	157.8	31.24	3118
2001	158.6	31.05	3012
2002	158.8	31.80	3031

10th Grade

	Mean Weight	Std Dev	Wtd. N
1989			
1990			
1991	125.6	22.30	3403
1992	126.3	23.51	3280
1993	127.7	23.43	3429
1994	128.3	23.72	3488
1995	127.7	23.46	3670
1996	127.5	23.79	3396
1997	129.1	25.05	3576
1998	129.0	24.70	3428
1999	130.6	25.52	3265
2000	129.1	25.13	3250
2001	131.0	26.03	3305
2002	131.9	26.84	3314

TABLE 2 (cont.)

Males

Females

	12th Grade			12th Grade			
	Mean	Std Dev	Wtd. N	Mean	Std Dev	Wtd. N	
	Weight			Weight			
1986	159.3	24.34	1263	126.3	19.15	1454	
1987	159.4	25.21	1381	127.7	21.41	1503	
1988	162.0	25.84	1376	128.6	22.73	1507	
1989	159.2	25.77	1179	129.9	24.40	1269	
1990	161.1	24.84	1063	127.1	21.63	1067	
1991	160.9	26.38	1052	129.3	23.45	1070	
1992	162.7	26.17	1014	130.8	23.89	1126	
1993	163.6	26.44	1021	132.5	25.09	1172	
1994	164.3	27.47	990	131.7	25.28	1135	
1995	165.0	27.70	1000	131.0	24.80	1103	
1996	165.2	28.03	906	133.6	25.23	1022	
1997	164.2	27.99	920	134.4	25.88	1079	
1998	165.9	28.38	943	133.4	25.64	1044	
1999	167.6	29.02	870	134.2	26.04	958	
2000	168.1	28.95	815	2000	136.0	28.49	837
2001	166.2	28.72	776	2001	133.4	25.57	942
2002	167.9	29.19	792	2002	134.8	26.08	951

TABLE 3
Trends in Mean Body Mass Index: 8th, 10th, and 12th Graders

Males

8th Grade			
	Mean		
	BMI	Std Dev	Wtd. N
1989			
1990			
1991	20.7	3.69	3383
1992	21.0	3.72	3257
1993	20.9	3.78	3416
1994	21.0	3.71	3168
1995	21.2	3.89	3056
1996	21.3	3.97	3298
1997	21.0	3.84	3253
1998	21.5	4.13	3288
1999	21.4	4.09	3186
2000	21.5	4.13	3138
2001	21.7	4.37	2960
2002	21.4	4.19	2874

Females

8th Grade			
	Mean		
	BMI	Std Dev	Wtd. N
1989			
1990			
1991	20.4	3.42	3480
1992	20.6	3.68	3640
1993	20.7	3.71	3617
1994	21.0	3.96	3480
1995	21.1	3.95	3304
1996	20.9	3.83	3487
1997	20.7	3.73	3589
1998	20.7	3.80	3487
1999	20.9	3.94	3522
2000	21.0	4.00	3334
2001	20.9	4.09	3371
2002	21.1	4.08	3261

10th Grade

10th Grade			
	Mean		
	BMI	Std Dev	Wtd. N
1989			
1990			
1991	22.1	3.56	3142
1992	22.3	3.69	2971
1993	22.4	3.58	3215
1994	22.5	3.65	3364
1995	22.6	3.69	3597
1996	22.5	3.75	3197
1997	22.7	3.84	3165
1998	22.8	3.87	3077
1999	22.8	4.09	2864
2000	23.0	4.11	3100
2001	23.1	4.17	2990
2002	23.1	4.18	3019

10th Grade

10th Grade			
	Mean		
	BMI	Std Dev	Wtd. N
1989			
1990			
1991	21.4	3.57	3408
1992	21.4	3.69	3246
1993	21.6	3.79	3420
1994	21.7	3.73	3478
1995	21.5	3.74	3661
1996	21.6	3.70	3372
1997	21.8	3.99	3570
1998	21.8	3.99	3426
1999	22.0	4.01	3254
2000	21.8	3.94	3246
2001	22.2	4.22	3306
2002	22.4	4.31	3308

TABLE 3 (cont.)**Males****12th Grade**

	Mean BMI	Std Dev	Wtd. N
1986	22.6	2.94	1261
1987	22.7	2.99	1376
1988	23.0	3.24	1377
1989	22.8	3.37	1184
1990	22.9	3.12	1066
1991	22.9	3.35	1053
1992	23.2	3.39	1015
1993	23.2	3.36	1017
1994	23.2	3.26	988
1995	23.3	3.51	1007
1996	23.5	3.60	905
1997	23.4	3.59	916
1998	23.7	3.77	938
1999	23.6	3.60	869
2000	23.5	3.52	816
2001	23.5	3.79	765
2002	23.7	3.85	782

Females**12th Grade**

	Mean BMI	Std Dev	Wtd. N
1986	21.2	2.98	1451
1987	21.4	3.27	1497
1988	21.6	3.55	1499
1989	21.8	3.75	1269
1990	21.5	3.43	1067
1991	21.7	3.44	1073
1992	22.0	3.80	1121
1993	22.2	3.80	1171
1994	22.0	3.90	1125
1995	22.0	3.84	1109
1996	22.4	3.89	1018
1997	22.4	3.80	1078
1998	22.6	4.08	1048
1999	22.6	4.09	960
2000	22.8	4.40	837
2001	22.5	3.93	945
2002	22.8	4.26	947

TABLE 4
Trends in Percent at Risk of Overweight*: 8th, 10th, and 12th Graders

Males				Females			
	8th Grade	10th Grade	12th Grade		8th Grade	10th Grade	12th Grade
1986			11.3	1986			5.7
1987			12.0	1987			7.1
1988			13.0	1988			8.8
1989			13.0	1989			9.7
1990			14.2	1990			8.4
1991			11.9	1991			7.1
1992			14.0	1992			9.2
1993	13.0	14.4	15.2	1993	11.8	9.8	12.6
1994	15.4	15.3	15.1	1994	13.5	11.9	10.1
1995	14.6	16.0	16.4	1995	12.6	10.7	9.0
1996	15.8	15.0	14.1	1996	13.1	11.5	11.3
1997	13.0	17.2	15.1	1997	11.9	11.7	11.9
1998	16.1	15.7	17.8	1998	12.4	10.7	10.9
1999	15.5	15.7	15.6	1999	12.8	12.1	12.0
2000	16.5	16.5	19.0	2000	12.3	11.7	14.5
2001	15.2	15.2	16.9	2001	11.9	12.7	11.1
2002	15.1	16.8	16.2	2002	12.1	13.7	12.9

*"At risk" defined as those between the 85th and 95th percentile BMI.

TABLE 5
Trends in Percent Overweight*: 8th, 10th, and 12th Graders

Males

	8th Grade	10th Grade	12th Grade
1986			3.3
1987			3.2
1988			5.5
1989			5.1
1990			3.5
1991			6.2
1992			7.1
1993	10.0	9.9	6.1
1994	9.8	10.9	6.3
1995	11.2	11.1	7.3
1996	11.6	11.8	8.8
1997	11.3	12.0	8.3
1998	13.4	12.7	9.4
1999	12.7	13.4	9.8
2000	13.5	14.7	7.4
2001	15.6	15.4	9.0
2002	12.9	15.6	11.2

Females

	8th Grade	10th Grade	12th Grade
1986			1.9
1987			3.1
1988			3.2
1989			3.7
1990			2.4
1991			3.4
1992			4.3
1993	6.3	5.6	4.3
1994	7.5	5.0	4.7
1995	8.2	5.3	4.8
1996	6.9	4.4	5.1
1997	6.5	6.5	4.6
1998	6.3	6.2	6.1
1999	7.6	7.2	5.9
2000	8.3	6.2	7.1
2001	8.0	8.6	5.4
2002	8.4	9.1	7.0

*"Overweight" defined as those at or above the 95th percentile BMI.

TABLE 6
Trends in Vigorous Exercise*: 8th, 10th, and 12th Graders

Males

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	3.9	7.6	13.7	14.2	19.4	41.2	60.6	3387
1992	3.5	7.1	12.7	14.3	19.5	42.9	62.4	3229
1993	4.5	7.4	14.4	12.2	19.4	42.0	61.5	3422
1994	4.6	7.7	14.1	14.9	18.3	40.4	58.7	3176
1995	4.6	7.3	13.5	14.5	19.0	41.2	60.1	3050
1996	3.8	7.4	13.8	13.8	18.6	42.5	61.1	3321
1997	3.7	8.0	13.1	14.8	18.3	42.0	60.3	2191
1998	3.5	6.3	13.5	14.7	19.7	42.2	61.9	2205
1999	3.2	7.6	13.1	16.8	19.8	39.5	59.3	2110
2000	4.3	7.6	15.7	14.1	18.8	39.5	58.3	2057
2001	5.0	8.5	13.7	14.3	17.8	40.8	58.6	1903
2002	4.2	7.3	13.5	14.1	20.1	40.9	61.0	1907

Females

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	3.7	9.7	20.1	18.1	20.2	28.2	48.4	3516
1992	3.5	10.7	21.6	16.5	19.6	28.1	47.8	3666
1993	4.0	10.1	20.9	16.7	19.2	29.3	48.4	3684
1994	4.3	10.1	21.3	17.0	18.8	28.4	47.2	3524
1995	4.0	11.2	18.9	16.0	20.3	29.6	49.9	3332
1996	4.8	8.9	20.8	16.9	18.3	30.3	48.5	3540
1997	3.4	10.1	19.7	18.3	18.6	29.9	48.5	2395
1998	3.8	9.8	20.2	18.0	19.5	28.8	48.2	2367
1999	3.8	10.0	20.1	17.6	19.7	28.7	48.4	2352
2000	4.9	10.5	21.1	16.4	18.8	28.3	47.1	2199
2001	4.0	9.7	21.4	16.2	19.6	29.0	48.6	2289
2002	3.6	10.0	19.3	17.5	19.9	29.7	49.5	2150

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	3.5	8.8	13.9	14.0	19.8	40.0	59.8	3125
1992	2.7	9.2	13.7	13.7	20.4	40.4	60.8	2958
1993	3.6	8.4	14.7	12.8	19.2	41.4	60.6	3196
1994	4.3	8.6	15.2	14.6	18.3	39.0	57.3	3349
1995	3.9	8.4	15.6	14.8	19.1	38.3	57.3	3580
1996	4.0	9.3	14.7	14.6	19.1	38.4	57.4	3200
1997	4.7	8.1	16.9	14.1	18.6	37.6	56.2	2037
1998	5.0	9.4	13.8	17.8	17.2	36.9	54.1	2049
1999	4.4	9.2	15.3	14.6	18.7	37.7	56.4	1964
2000	3.6	8.8	15.7	18.2	17.7	35.9	53.7	2063
2001	5.0	10.8	15.1	16.1	18.6	34.4	53.0	1985
2002	5.3	9.5	16.5	15.6	19.6	33.4	53.0	1971

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	5.2	13.4	24.0	15.6	17.2	24.6	41.8	3407
1992	4.7	13.4	23.1	16.6	17.3	24.9	42.1	3285
1993	4.5	14.0	24.8	17.2	15.8	23.8	39.5	3457
1994	4.9	13.8	22.7	17.0	17.5	24.1	41.7	3520
1995	4.8	12.3	24.3	15.2	19.5	23.9	43.4	3701
1996	4.1	13.2	25.3	17.0	17.0	23.5	40.5	3410
1997	4.6	13.5	25.4	15.4	16.4	24.6	41.0	2408
1998	4.8	15.8	23.2	17.7	14.8	23.7	38.5	2296
1999	5.1	14.3	25.0	14.8	17.2	23.6	40.8	2132
2000	6.0	13.9	25.8	15.6	17.0	21.7	38.7	2135
2001	4.9	13.8	23.3	16.9	17.8	23.2	41.0	2179
2002	5.7	15.6	24.1	15.3	17.0	22.5	39.5	2193

*Jogging, swimming, calisthenics, or any other active sports

TABLE 6 (cont.)

Males

Females

	12th Grade							Wtd N		12th Grade							Wtd N
	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More			Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
1979	2.0	8.1	21.1	18.9	21.1	28.9	50.0	1341	1979	2.8	16.0	30.2	18.2	15.2	17.6	32.8	1417
1980	1.0	8.9	20.0	15.5	21.4	33.2	54.5	1359	1980	2.2	15.2	31.5	20.4	15.5	15.2	30.7	1427
1981	2.6	10.0	19.0	16.3	19.7	32.5	52.2	1503	1981	2.9	14.9	31.2	16.6	17.0	17.4	34.4	1592
1982	2.4	8.9	21.7	17.8	21.6	27.5	49.2	1512	1982	2.9	16.3	30.8	18.4	14.9	16.7	31.6	1558
1983	2.6	8.1	21.0	18.8	20.6	28.9	49.5	1360	1983	4.3	16.0	33.6	17.5	13.9	14.6	28.6	1441
1984	3.2	13.6	20.1	16.6	18.7	27.8	46.5	1347	1984	4.4	19.9	31.1	16.1	13.9	14.6	28.5	1394
1985	4.3	12.2	19.0	17.5	23.0	24.1	47.0	1322	1985	5.0	19.3	31.4	16.8	14.3	13.2	27.5	1458
1986	4.5	14.1	18.7	17.2	20.1	25.5	45.6	1231	1986	5.7	22.3	29.8	15.2	12.6	14.3	27.0	1430
1987	4.1	11.1	22.0	17.5	20.4	24.7	45.2	1290	1987	6.5	22.7	27.3	17.3	11.7	14.6	26.2	1482
1988	4.2	12.0	21.6	15.8	18.7	27.6	46.4	1316	1988	8.1	24.8	29.5	14.4	11.4	11.8	23.2	1457
1989	4.4	13.1	20.0	17.3	16.8	28.4	45.2	1151	1989	6.8	24.9	29.7	15.1	11.0	12.6	23.6	1274
1990	5.3	11.3	19.4	19.1	17.5	27.4	45.0	1114	1990	7.8	22.4	27.5	17.6	12.3	12.2	24.6	1029
1991	5.3	12.8	22.6	14.0	21.5	23.8	45.3	1065	1991	7.3	21.2	28.4	14.0	13.5	15.5	29.1	1073
1992	4.7	11.5	18.2	15.5	19.4	30.8	50.2	1012	1992	7.0	20.4	29.0	17.1	11.8	14.6	26.4	1157
1993	5.6	13.4	21.3	15.7	15.3	28.7	44.1	1025	1993	7.6	22.7	27.3	16.3	12.2	13.9	26.1	1130
1994	6.8	12.6	19.6	15.5	18.7	26.8	45.5	990	1994	6.0	23.3	25.2	17.5	12.8	15.1	28.0	1117
1995	5.9	13.0	19.7	17.5	17.9	26.0	43.9	995	1995	5.2	20.9	31.5	15.4	12.9	14.1	26.9	1141
1996	5.8	13.4	20.3	17.0	18.4	25.1	43.5	922	1996	7.4	20.6	32.2	13.9	12.8	13.1	25.9	1032
1997	5.9	13.4	20.6	15.8	15.9	28.4	44.3	943	1997	8.6	19.1	27.3	16.4	13.3	15.2	28.6	1121
1998	5.9	13.5	21.8	16.4	18.5	23.9	42.4	988	1998	8.4	21.1	30.2	15.6	11.4	13.2	24.6	1084
1999	5.4	13.2	23.4	17.7	15.9	24.3	40.3	915	1999	8.1	24.9	23.9	16.3	12.2	14.6	26.8	956
2000	6.4	14.3	23.5	15.5	15.4	25.0	40.4	757	2000	8.5	21.0	28.9	14.3	13.9	13.4	27.3	902
2001	5.6	16.0	18.8	16.3	15.6	27.7	43.3	855	2001	8.1	22.1	25.7	17.9	12.3	14.0	26.3	905
2002	7.5	12.3	22.4	15.5	17.6	24.8	42.3	909	2002	9.1	18.2	29.3	17.2	13.7	12.5	26.2	913

TABLE 7
Trends in Participation in Sports, Athletics, or Exercise: 8th, 10th, and 12th Graders

Males

	8th Grade					
	Never	A Few Times a Year	Once or Twice a Month	At Least Once a Week	Almost Every Day	Wtd N
	1989					
1990						
1991	5.0	8.1	6.0	15.8	65.1	8627
1992	4.8	8.0	6.2	16.4	64.6	8845
1993	4.9	7.8	6.4	16.2	64.7	8704
1994	5.7	8.1	6.6	16.4	63.1	8381
1995	4.7	8.0	5.7	16.1	65.6	8229
1996	5.9	8.8	6.0	16.8	62.5	8533
1997	4.9	9.0	6.1	16.8	63.2	8771
1998	5.1	9.2	6.8	17.6	61.2	8771
1999	5.0	9.0	7.3	18.7	59.9	7970
2000	5.4	9.5	6.9	17.7	60.6	8048
2001	6.4	9.2	6.8	18.1	59.5	7677
2002	6.2	8.7	6.7	17.8	60.6	7146

Females

	8th Grade					
	Never	A Few Times a Year	Once or Twice a Month	At Least Once a Week	Almost Every Day	Wtd N
	1989					
1990						
1991	7.9	11.6	9.4	22.2	48.9	8626
1992	8.3	13.1	10.9	22.4	45.3	9345
1993	8.1	13.4	11.4	21.2	46.0	9247
1994	8.4	14.3	10.9	23.0	43.5	8661
1995	7.6	13.6	10.4	21.6	46.8	8747
1996	7.2	13.6	10.9	21.6	46.6	8984
1997	6.6	12.1	10.6	22.5	48.2	9413
1998	7.4	13.0	11.3	23.2	45.1	9081
1999	7.1	13.2	10.4	23.4	45.9	8540
2000	8.0	12.4	10.3	21.8	47.5	8478
2001	8.0	13.3	10.3	22.1	46.3	8380
2002	7.8	12.1	10.7	21.2	48.2	7699

10th Grade

	10th Grade					
	Never	A Few Times a Year	Once or Twice a Month	At Least Once a Week	Almost Every Day	Wtd N
	1989					
1990						
1991	6.1	8.6	6.2	16.2	62.8	7231
1992	5.9	8.4	5.9	16.1	63.7	7080
1993	6.6	8.2	6.7	16.8	61.7	7346
1994	6.0	8.7	7.0	16.7	61.5	7751
1995	6.4	8.5	6.9	16.7	61.5	8382
1996	7.3	8.6	6.8	17.0	60.3	7587
1997	7.0	8.4	7.1	17.5	59.8	7483
1998	7.2	9.5	8.1	17.3	58.0	7182
1999	7.5	8.7	7.3	16.4	60.1	6398
2000	7.5	8.5	7.6	17.5	58.9	6869
2001	8.6	9.2	7.4	17.9	56.9	6665
2002	9.2	9.6	7.1	17.5	56.6	6991

10th Grade

	10th Grade					
	Never	A Few Times a Year	Once or Twice a Month	At Least Once a Week	Almost Every Day	Wtd N
	1989					
1990						
1991	10.6	13.3	11.0	19.7	45.3	7426
1992	9.4	14.3	10.6	20.9	44.7	7420
1993	9.4	13.1	11.8	21.2	44.6	7725
1994	9.1	13.0	11.4	22.4	44.1	7897
1995	9.0	12.4	12.0	21.2	45.4	8408
1996	9.7	12.3	11.9	22.2	43.9	7820
1997	9.3	13.6	11.3	20.5	45.2	7811
1998	10.3	14.8	12.3	20.7	42.0	7772
1999	9.9	13.5	11.2	21.4	44.0	7069
2000	10.2	13.8	10.8	21.2	44.0	7293
2001	9.7	13.8	10.5	21.7	44.4	7187
2002	11.3	13.2	11.2	20.7	43.5	7178

TABLE 7 (cont.)

Males

Females

	12th Grade							12th Grade					
	Never	A Few Times a Year	Once or Twice a Month	At Least Once a Week	Almost Every Day	Wtd N		Never	A Few Times a Year	Once or Twice a Month	At Least Once a Week	Almost Every Day	Wtd N
1976	5.7	10.1	10.3	22.2	51.7	1450	1976	7.7	13.8	17.0	26.1	35.6	1431
1977	5.2	7.5	9.4	24.3	53.6	1477	1977	7.9	14.0	12.9	28.3	36.8	1576
1978	4.6	7.9	9.2	25.1	53.2	1725	1978	6.5	13.9	15.6	26.0	37.9	1863
1979	5.0	7.7	10.2	21.0	56.2	1617	1979	6.7	14.3	12.9	27.3	38.8	1594
1980	3.7	6.4	10.4	22.7	56.8	1595	1980	6.7	13.1	14.9	27.8	37.5	1603
1981	5.1	7.2	8.7	22.7	56.4	1754	1981	6.7	12.0	14.8	27.9	38.7	1751
1982	4.8	7.4	10.1	22.1	55.5	1784	1982	6.4	13.6	14.3	28.5	37.3	1762
1983	3.9	8.4	9.6	22.2	55.8	1663	1983	6.5	13.7	16.4	27.5	35.9	1634
1984	6.7	10.0	9.1	19.9	54.3	1619	1984	8.3	12.7	16.2	29.6	33.2	1570
1985	5.5	9.5	8.5	23.7	52.8	1569	1985	7.1	13.3	18.0	28.1	33.5	1639
1986	5.5	8.7	9.9	21.6	54.2	1474	1986	7.9	13.3	17.4	25.8	35.6	1587
1987	3.8	8.6	9.6	23.2	54.8	1562	1987	8.3	15.2	15.8	26.6	34.1	1667
1988	4.8	6.7	10.3	21.1	57.0	1574	1988	8.4	14.5	19.5	27.0	30.6	1646
1989	5.5	7.9	9.8	21.6	55.2	1353	1989	9.7	13.0	18.4	26.1	32.9	1428
1990	5.3	7.4	8.2	23.2	55.8	1334	1990	10.8	13.7	15.2	26.2	34.1	1178
1991	6.1	7.3	9.5	22.4	54.7	1268	1991	8.0	14.0	15.5	26.1	36.4	1201
1992	6.1	7.1	8.1	20.0	58.6	1267	1992	8.7	12.3	14.7	31.8	32.6	1302
1993	6.1	8.9	9.0	21.1	54.8	1283	1993	9.7	14.1	17.0	26.3	32.9	1317
1994	5.5	6.6	8.6	23.8	55.6	1206	1994	8.9	13.5	17.9	24.1	35.5	1301
1995	6.3	7.1	9.7	22.4	54.5	1231	1995	8.0	11.0	15.8	28.7	36.6	1310
1996	6.4	6.9	8.8	19.6	58.3	1137	1996	10.3	15.1	16.0	26.4	32.2	1194
1997	5.5	6.4	9.0	22.9	56.1	1201	1997	10.4	12.0	14.2	28.0	35.5	1300
1998	5.5	8.4	10.3	22.6	53.2	1220	1998	12.5	11.4	17.0	24.7	34.5	1295
1999	5.5	7.9	9.5	23.0	54.2	1107	1999	9.9	15.0	13.9	24.6	36.6	1102
2000	7.2	5.4	12.5	25.5	49.4	997	2000	8.6	13.1	15.9	27.2	35.2	1095
2001	6.3	6.4	10.3	21.5	55.5	1030	2001	11.0	16.5	14.4	26.1	32.0	1087
2002	7.3	9.1	8.8	24.6	50.1	1091	2002	9.4	14.4	16.7	24.7	34.8	1069

TABLE 8
Trends in Participation on School Athletic Teams: 8th, 10th, and 12th Graders

Males

8th Grade

	Not at					Considerable	
	All	Slight	Moderate	Considerable	Great	or Great	Wtd N
1986							
1987							
1988							
1989							
1990							
1991	25.9	9.2	11.6	11.4	41.9	53.3	3393
1992	28.9	7.9	9.9	11.7	41.6	53.2	3387
1993	29.0	8.7	8.8	10.4	43.0	53.5	3431
1994	29.8	9.6	9.7	10.3	40.6	50.8	3355
1995	27.4	8.9	9.5	10.4	43.9	54.3	3012
1996	30.3	9.7	10.0	9.8	40.1	50.0	3314
1997	31.6	9.9	9.4	9.2	39.8	49.0	3211
1998	28.2	8.8	9.9	12.5	40.5	53.1	3394
1999	30.8	8.5	9.4	10.4	41.0	51.4	3249
2000	30.9	7.8	9.1	10.7	41.5	52.2	3164
2001	29.1	7.3	9.5	11.1	43.0	54.1	3022
2002	31.5	8.0	8.4	10.8	41.3	52.1	3045

Females

8th Grade

	Not at					Considerable	
	All	Slight	Moderate	Considerable	Great	or Great	Wtd N
1986							
1987							
1988							
1989							
1990							
1991	33.6	12.7	11.0	12.4	30.3	42.7	3567
1992	35.7	11.5	10.0	11.6	31.3	42.8	3736
1993	37.2	11.0	10.1	10.8	31.0	41.8	3870
1994	36.8	12.1	10.0	10.1	30.9	41.0	3496
1995	35.9	10.3	10.6	10.4	32.8	43.2	3359
1996	34.4	11.1	9.2	12.0	33.3	45.3	3664
1997	34.4	11.3	10.1	9.2	35.1	44.3	3674
1998	34.1	12.2	10.4	9.7	33.6	43.3	3655
1999	33.3	11.6	8.7	11.1	35.3	46.4	3579
2000	34.3	10.3	8.4	10.0	37.0	47.0	3469
2001	32.4	9.9	9.7	10.5	37.6	48.1	3421
2002	33.7	8.9	9.4	10.1	37.9	48.0	3297

10th Grade

	Not at					Considerable	
	All	Slight	Moderate	Considerable	Great	or Great	Wtd N
1986							
1987							
1988							
1989							
1990							
1991	31.3	8.8	10.1	11.8	38.1	49.9	3209
1992	30.1	7.6	10.1	12.8	39.4	52.2	3033
1993	31.9	7.5	10.4	12.0	38.1	50.1	3197
1994	31.1	8.3	8.9	12.2	39.6	51.8	3346
1995	31.8	8.2	10.0	11.0	38.9	50.0	3576
1996	34.6	6.9	9.5	10.3	38.7	49.0	3272
1997	34.2	8.6	8.7	10.9	37.6	48.5	3385
1998	32.4	7.9	9.4	9.7	40.6	50.3	3140
1999	32.0	8.2	8.4	11.0	40.4	51.4	2841
2000	34.6	7.3	9.6	10.9	37.7	48.5	3006
2001	33.7	6.7	8.9	10.9	39.8	50.7	2941
2002	35.6	8.3	8.4	9.6	38.1	47.7	3153

10th Grade

	Not at					Considerable	
	All	Slight	Moderate	Considerable	Great	or Great	Wtd N
1986							
1987							
1988							
1989							
1990							
1991	47.9	8.6	8.7	10.6	24.3	34.8	3400
1992	43.1	9.3	8.5	11.5	27.6	39.1	3370
1993	43.5	8.5	9.8	9.9	28.3	38.2	3502
1994	45.3	7.6	8.5	10.2	28.4	38.6	3559
1995	42.6	8.4	8.7	10.8	29.6	40.3	3747
1996	42.6	8.9	8.6	10.7	29.2	39.9	3387
1997	42.3	7.9	8.0	10.4	31.5	41.8	3505
1998	44.5	7.5	10.0	10.3	27.6	38.0	3547
1999	42.7	8.1	7.8	12.0	29.4	41.4	3262
2000	42.0	8.3	8.4	9.6	31.7	41.3	3407
2001	40.1	7.5	8.4	10.4	33.6	44.0	3374
2002	42.3	7.7	7.4	10.2	32.3	42.6	3224

TABLE 8 (cont.)

Males

	12th Grade						
	Not at	Slight	Moderate	Considerable	Great	Considerable	
	All					or Great	Wtd N
1986	36.7	10.4	10.8	13.3	28.8	42.1	1265
1987	37.3	9.3	11.1	12.9	29.4	42.3	1312
1988	35.7	8.4	11.7	12.9	31.3	44.2	1345
1989	36.9	8.0	11.7	12.1	31.2	43.3	1164
1990	35.3	9.7	10.3	10.8	33.9	44.8	1134
1991	35.7	8.3	12.5	13.8	29.6	43.4	1089
1992	35.8	5.8	11.1	10.4	36.8	47.3	1047
1993	34.7	6.9	14.2	9.8	34.3	44.1	1038
1994	33.5	7.9	9.9	13.5	35.1	48.6	1015
1995	37.5	7.7	11.5	11.6	31.7	43.3	1013
1996	34.8	9.2	10.4	8.7	36.9	45.6	943
1997	35.5	8.3	9.8	11.3	35.0	46.3	985
1998	37.4	9.6	9.9	10.1	33.1	43.2	999
1999	39.1	6.2	9.0	10.0	35.7	45.7	935
2000	37.9	8.0	9.5	13.4	31.2	44.6	783
2001	39.1	6.0	11.6	10.7	32.6	43.3	863
2002	38.0	8.5	12.6	9.3	31.7	41.0	924

Females

	12th Grade						
	Not at	Slight	Moderate	Considerable	Great	Considerable	
	All					or Great	Wtd N
1986	55.0	10.1	8.2	8.3	18.4	26.7	1450
1987	56.3	8.9	8.1	9.0	17.7	26.7	1491
1988	56.7	9.9	8.5	9.3	15.5	24.8	1469
1989	56.9	7.8	8.3	8.2	18.9	27.0	1285
1990	53.1	8.8	10.3	7.3	20.5	27.8	1044
1991	53.7	9.7	9.6	9.6	17.4	27.1	1096
1992	53.4	7.4	8.3	9.6	21.3	31.0	1186
1993	55.2	8.2	9.9	7.0	19.8	26.7	1137
1994	54.9	7.8	7.9	10.0	19.4	29.3	1145
1995	52.1	6.3	9.1	10.6	21.8	32.4	1152
1996	54.4	7.5	8.6	9.4	20.1	29.5	1053
1997	51.1	10.0	7.7	8.7	22.5	31.2	1144
1998	52.0	8.2	8.6	8.1	23.1	31.3	1112
1999	53.7	7.4	7.6	9.4	21.9	31.3	973
2000	51.3	6.9	7.6	9.5	24.7	34.2	923
2001	50.8	7.9	9.3	10.2	21.8	32.0	935
2002	52.8	7.8	8.2	7.1	24.1	31.2	928

TABLE 9
Trends in Frequency of Eating Breakfast: 8th, 10th, and 12th Graders

Males

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
							Every Day	Wtd N
1990								
1989								
1991	5.7	14.4	13.3	9.0	11.4	46.2	57.6	3418
1992	4.9	13.7	13.1	10.2	12.0	46.0	58.0	3269
1993	6.2	14.6	11.8	10.7	12.9	43.8	56.6	3445
1994	6.2	13.0	13.3	9.8	11.5	46.2	57.7	3197
1995	5.3	14.5	11.7	9.8	11.5	47.1	58.7	3085
1996	6.4	14.4	12.0	10.3	10.5	46.4	56.9	3350
1997	6.0	13.9	13.0	10.4	11.9	44.7	56.6	2200
1998	5.9	13.8	13.7	11.3	12.4	42.9	55.3	2231
1999	6.1	14.7	14.0	11.8	11.9	41.4	53.3	2131
2000	7.1	15.6	14.0	11.0	11.8	40.6	52.4	2088
2001	7.1	15.7	16.5	9.5	10.9	40.3	51.2	1919
2002	6.6	11.7	14.3	11.3	13.8	42.3	56.1	1917

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
							Every Day	Wtd N
1990								
1989								
1991	6.3	19.2	15.6	8.6	11.9	38.3	50.3	3149
1992	6.2	19.8	15.0	9.1	11.5	38.4	49.9	2986
1993	7.7	16.7	15.2	9.8	11.0	39.7	50.6	3218
1994	6.9	19.3	15.0	10.7	11.0	37.1	48.1	3372
1995	7.3	18.9	13.9	10.1	11.3	38.6	49.9	3602
1996	7.5	20.5	14.7	10.5	10.2	36.6	46.8	3215
1997	8.1	19.6	15.3	8.2	10.9	37.9	48.8	2045
1998	8.2	18.6	16.5	10.2	11.6	34.9	46.5	2056
1999	8.2	19.2	16.9	11.1	13.1	31.5	44.6	1973
2000	8.6	21.1	18.0	10.1	10.5	31.8	42.3	2077
2001	10.3	20.1	16.5	9.6	11.3	32.2	43.5	2004
2002	9.0	21.1	18.6	10.3	11.0	30.0	41.0	1982

Females

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
							Every Day	Wtd N
1990								
1989								
1991	8.4	26.4	16.7	11.3	11.4	25.9	37.2	3551
1992	10.1	24.7	19.1	11.2	10.7	24.2	34.9	3740
1993	9.4	24.6	18.4	11.2	11.8	24.6	36.4	3716
1994	8.6	24.0	20.5	10.7	11.0	25.2	36.2	3547
1995	9.0	24.5	16.8	10.9	11.4	27.3	38.7	3369
1996	10.9	24.1	17.1	10.8	11.6	25.5	37.1	3564
1997	11.9	22.8	17.9	9.9	10.5	26.9	37.4	2419
1998	10.3	24.3	18.0	10.0	10.2	27.3	37.5	2382
1999	11.1	21.8	19.6	10.5	11.4	25.6	37.0	2375
2000	10.8	23.8	19.6	10.0	12.1	23.8	35.9	2232
2001	10.4	23.3	19.5	10.8	10.9	25.1	36.0	2301
2002	11.3	22.1	19.0	10.5	13.3	23.7	37.1	2165

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
							Every Day	Wtd N
1990								
1989								
1991	8.7	29.2	19.1	9.6	11.1	22.2	33.3	3431
1992	10.0	26.9	19.6	10.8	11.2	21.6	32.8	3306
1993	10.1	27.7	17.8	10.1	10.9	23.4	34.3	3476
1994	9.9	28.4	18.7	10.7	11.6	20.7	32.3	3538
1995	10.7	27.3	17.8	9.6	11.9	22.7	34.5	3725
1996	10.8	26.6	20.9	10.5	11.0	20.1	31.1	3438
1997	11.0	28.1	19.0	10.6	10.6	20.7	31.3	2419
1998	11.2	29.7	18.7	10.8	9.5	20.1	29.6	2320
1999	11.3	27.8	19.7	10.1	9.9	21.2	31.0	2150
2000	10.5	26.7	20.6	10.5	12.2	19.6	31.8	2156
2001	9.5	26.1	20.6	12.6	11.3	19.9	31.2	2186
2002	10.9	29.0	20.8	10.1	10.2	18.9	29.1	2201

TABLE 9 (cont.)

Males

12th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
							or More	Wtd N
1979	6.9	21.6	14.7	11.1	13.0	32.7	45.7	1347
1980	6.2	21.3	17.8	9.9	10.7	34.0	44.7	1370
1981	6.5	21.8	13.8	12.0	12.8	33.1	46.0	1508
1982	5.1	21.0	17.1	10.6	11.0	35.3	46.2	1521
1983	7.0	23.7	15.9	10.2	11.8	31.4	43.2	1365
1984	8.9	23.3	13.8	9.5	10.5	34.0	44.5	1352
1985	8.4	24.3	15.7	8.1	11.0	32.4	43.4	1328
1986	10.0	25.3	14.7	9.6	10.8	29.6	40.4	1245
1987	9.6	25.6	15.9	12.0	8.8	28.2	37.0	1297
1988	8.4	26.0	18.3	9.7	10.1	27.6	37.6	1323
1989	11.8	23.7	17.1	9.0	10.6	27.7	38.4	1159
1990	7.7	26.0	16.1	9.9	11.8	28.4	40.3	1118
1991	10.5	26.5	17.2	10.6	10.9	24.3	35.3	1061
1992	7.3	25.3	15.8	8.8	9.5	33.3	42.8	1010
1993	7.9	25.7	17.5	9.2	8.8	30.8	39.6	1029
1994	11.5	26.5	15.0	10.8	9.5	26.7	36.3	993
1995	10.6	26.1	14.7	10.9	11.0	26.7	37.7	1003
1996	11.6	23.9	16.2	11.3	8.2	28.8	37.0	934
1997	11.7	26.2	18.3	9.6	9.4	24.7	34.1	956
1998	9.5	27.7	17.6	9.3	9.5	26.5	36.0	991
1999	10.6	29.9	18.3	10.1	8.5	22.6	31.2	919
2000	10.8	24.4	18.6	14.2	8.0	24.0	32.0	759
2001	10.0	27.7	19.7	9.9	10.0	22.7	32.7	857
2002	12.4	26.3	21.5	10.2	8.4	21.2	29.6	921

Females

12th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	
							or More	Wtd N
1979	11.3	27.0	16.7	9.7	11.1	24.1	35.2	1422
1980	9.7	29.5	18.1	9.3	12.7	20.7	33.4	1432
1981	8.6	29.6	18.0	10.4	11.9	21.6	33.5	1597
1982	9.3	30.9	18.0	10.3	10.9	20.6	31.6	1558
1983	9.8	31.1	18.4	11.1	11.6	18.1	29.6	1445
1984	12.8	32.0	17.3	9.3	9.5	19.1	28.6	1402
1985	12.0	30.4	18.8	10.4	10.2	18.2	28.5	1461
1986	10.2	34.0	16.9	10.0	10.6	18.4	29.0	1437
1987	12.9	33.5	16.3	10.2	9.5	17.5	27.0	1487
1988	14.2	33.5	17.9	9.9	9.0	15.5	24.4	1462
1989	12.6	34.5	16.1	10.4	9.6	16.7	26.3	1280
1990	12.7	33.6	17.6	8.8	9.4	18.0	27.4	1033
1991	11.8	30.4	19.1	9.0	12.3	17.4	29.8	1079
1992	10.2	30.1	18.2	11.7	9.9	20.0	29.9	1162
1993	12.0	28.2	20.3	10.3	10.3	19.0	29.2	1136
1994	11.9	31.2	18.7	8.2	10.7	19.3	29.9	1123
1995	10.9	30.3	20.0	9.9	9.1	19.9	29.0	1142
1996	10.5	31.4	19.7	11.0	8.7	18.8	27.5	1034
1997	13.0	29.2	19.5	11.6	10.8	16.0	26.8	1127
1998	9.4	31.2	21.4	12.0	9.6	16.3	26.0	1089
1999	10.2	31.1	18.0	9.4	10.7	20.7	31.3	957
2000	9.0	31.1	20.5	9.7	8.9	20.8	29.7	904
2001	11.2	27.3	20.4	12.2	9.9	18.9	28.9	919
2002	11.1	29.0	22.9	12.4	9.4	15.1	24.5	918

TABLE 10
Trends in Frequency of Eating Green Vegetables: 8th, 10th, and 12th Graders

Males

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1990								
1989								
1991	6.4	13.2	17.6	19.3	18.3	25.2	43.5	3391
1992	7.1	12.3	19.8	16.8	19.0	25.0	44.0	3245
1993	8.0	12.2	20.4	17.3	18.0	24.0	41.9	3429
1994	8.2	11.6	19.8	16.9	17.3	26.2	43.5	3172
1995	6.8	11.7	19.1	18.0	17.7	26.7	44.4	3060
1996	7.1	10.2	19.6	18.9	17.2	27.0	44.2	3335
1997	6.4	9.6	18.0	20.1	18.2	27.7	45.9	2178
1998	6.9	10.6	17.8	20.9	19.8	24.1	43.9	2211
1999	7.4	11.4	17.0	19.6	19.1	25.5	44.6	2121
2000	6.5	10.9	19.6	20.3	18.7	23.9	42.7	2062
2001	6.6	13.0	18.8	20.1	19.2	22.3	41.5	1906
2002	7.4	9.6	19.1	16.9	19.1	27.8	47.0	1907

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1990								
1989								
1991	5.3	12.1	19.0	20.5	19.6	23.6	43.2	3134
1992	4.6	11.9	20.1	21.2	19.6	22.6	42.2	2967
1993	6.4	11.7	19.8	20.3	18.4	23.4	41.8	3206
1994	5.7	10.9	19.9	21.5	20.0	22.0	42.0	3355
1995	5.0	10.6	18.7	20.8	20.9	24.0	44.9	3588
1996	5.2	11.8	21.8	20.1	18.7	22.5	41.2	3203
1997	5.4	11.7	21.2	20.0	20.3	21.3	41.7	2037
1998	5.8	10.6	19.7	23.6	18.6	21.6	40.2	2053
1999	5.9	12.6	20.5	23.2	19.7	18.0	37.7	1965
2000	6.2	10.4	22.0	23.2	17.9	20.3	38.2	2072
2001	5.9	13.1	22.0	22.5	17.4	19.1	36.5	1991
2002	6.4	11.8	22.4	22.9	17.5	19.0	36.5	1972

Females

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1990								
1989								
1991	5.0	13.7	20.4	21.4	18.6	21.0	39.5	3528
1992	5.7	12.4	21.1	20.1	20.0	20.6	40.7	3701
1993	5.1	13.1	20.4	19.9	18.9	22.6	41.5	3695
1994	6.7	11.3	21.0	18.1	20.2	22.7	43.0	3530
1995	4.9	13.5	21.1	19.7	18.5	22.3	40.8	3343
1996	5.9	10.6	20.4	20.0	21.0	22.0	43.0	3550
1997	5.2	11.2	19.1	20.3	19.5	24.6	44.2	2406
1998	5.7	10.8	19.7	21.3	17.5	25.1	42.6	2374
1999	5.7	11.9	19.7	20.7	20.5	21.6	42.0	2359
2000	6.6	13.2	22.0	19.1	17.9	21.2	39.1	2211
2001	6.0	11.2	21.5	22.3	18.7	20.3	39.0	2298
2002	6.1	13.1	21.9	19.7	17.4	21.8	39.2	2156

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1990								
1989								
1991	3.7	11.5	23.4	21.7	20.3	19.4	39.7	3413
1992	4.0	12.3	22.1	23.1	18.8	19.7	38.5	3292
1993	4.6	11.1	21.9	22.5	20.6	19.3	39.9	3462
1994	4.1	11.4	21.4	22.3	20.2	20.7	40.8	3518
1995	4.0	11.0	21.8	21.2	20.4	21.6	42.0	3713
1996	4.1	11.0	21.1	23.3	20.2	20.3	40.5	3422
1997	4.2	11.5	23.0	21.1	20.1	20.1	40.2	2415
1998	4.6	11.1	21.4	23.6	19.1	20.2	39.3	2309
1999	3.9	12.1	23.5	20.7	20.1	19.6	39.7	2134
2000	4.3	10.8	23.0	23.2	22.5	16.2	38.7	2146
2001	4.0	11.2	24.0	23.6	21.2	16.0	37.2	2176
2002	5.7	13.4	22.6	25.3	17.9	15.1	33.0	2192

TABLE 10 (cont.)

Males

12th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1979	2.3	6.1	15.3	23.7	23.3	29.3	52.6	1343
1980	3.0	6.1	17.1	21.8	23.4	28.6	52.0	1360
1981	2.0	6.3	17.8	21.1	25.2	27.6	52.8	1499
1982	3.1	8.0	16.6	22.7	23.5	26.1	49.5	1514
1983	3.7	7.3	19.3	23.3	23.3	23.1	46.4	1357
1984	4.5	11.8	18.4	21.5	19.2	24.6	43.8	1348
1985	4.0	11.2	18.7	23.9	19.0	23.2	42.2	1325
1986	4.4	12.4	22.3	23.6	17.7	19.6	37.3	1239
1987	4.4	11.7	22.8	22.6	18.3	20.2	38.6	1295
1988	3.8	11.2	24.6	21.7	18.6	20.1	38.7	1317
1989	5.7	11.7	23.1	22.5	17.5	19.4	37.0	1151
1990	4.8	11.0	25.7	23.8	16.3	18.5	34.8	1115
1991	6.0	13.4	26.4	22.8	17.1	14.3	31.4	1062
1992	5.2	12.1	22.0	22.2	19.4	19.1	38.5	1012
1993	5.3	13.8	22.7	22.5	15.0	20.6	35.6	1025
1994	5.7	13.5	21.4	25.4	18.4	15.6	34.0	992
1995	6.6	12.4	23.4	23.3	17.1	17.3	34.4	1000
1996	6.1	14.2	23.7	21.8	17.1	17.2	34.3	926
1997	6.8	13.0	23.0	23.1	16.6	17.5	34.1	953
1998	6.1	10.9	24.0	23.8	17.4	17.8	35.2	987
1999	3.9	12.9	27.9	23.1	14.3	17.9	32.3	915
2000	6.0	9.8	25.4	28.2	14.4	16.4	30.7	756
2001	6.7	13.4	23.1	21.7	18.7	16.4	35.2	859
2002	6.9	11.8	24.2	27.0	16.7	13.3	30.1	915

Females

12th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1979	1.5	6.6	19.0	24.3	24.0	24.5	48.6	1419
1980	2.9	10.2	19.3	21.1	24.0	22.4	46.4	1427
1981	2.1	8.7	18.6	24.6	25.0	21.0	46.0	1582
1982	2.9	10.0	22.5	23.2	21.9	19.5	41.4	1548
1983	3.1	9.7	22.8	24.7	23.1	16.7	39.8	1439
1984	2.9	11.9	22.3	22.1	22.0	18.9	40.9	1396
1985	2.7	12.0	22.7	24.3	21.8	16.5	38.3	1455
1986	3.5	12.0	23.7	25.1	18.3	17.4	35.8	1433
1987	3.1	11.9	25.4	23.0	19.1	17.6	36.7	1482
1988	4.2	12.8	24.7	24.9	19.6	13.8	33.4	1461
1989	4.6	14.3	25.4	22.2	19.1	14.4	33.5	1273
1990	4.5	13.0	23.9	24.4	18.6	15.5	34.1	1035
1991	3.9	11.9	23.3	23.9	19.6	17.4	36.9	1077
1992	4.8	12.0	24.1	22.7	16.4	20.0	36.4	1159
1993	4.9	11.5	26.2	21.4	17.4	18.7	36.1	1133
1994	4.5	11.6	24.3	24.4	17.4	17.7	35.1	1118
1995	2.3	9.7	26.9	27.3	17.9	15.9	33.8	1140
1996	3.3	12.1	23.3	25.4	18.7	17.4	36.0	1033
1997	4.7	10.7	26.2	24.6	18.3	15.5	33.8	1123
1998	3.3	10.0	27.6	26.2	17.0	15.8	32.9	1083
1999	3.5	12.9	22.5	26.5	19.9	14.7	34.6	957
2000	2.6	11.4	26.3	26.4	18.2	15.0	33.3	901
2001	4.7	12.7	25.9	27.2	14.4	15.1	29.6	918
2002	4.2	9.5	28.5	25.3	18.7	13.7	32.4	917

TABLE 11
Trends in Frequency of Eating Fruit: 8th, 10th, and 12th Graders

Males

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	2.6	5.5	17.4	22.7	20.9	30.9	51.8	3376
1992	2.9	5.8	17.6	20.6	20.5	32.6	53.1	3202
1993	2.9	6.6	15.7	21.6	21.7	31.4	53.1	3385
1994	3.0	5.7	16.1	19.7	20.6	34.8	55.5	3142
1995	2.3	5.1	17.0	20.0	19.2	36.4	55.7	3025
1996	2.0	6.1	15.9	21.4	20.8	33.8	54.6	3281
1997	2.3	5.2	15.7	20.6	22.0	34.2	56.2	2174
1998	3.0	6.0	15.4	20.8	19.8	35.0	54.9	2195
1999	3.2	6.6	16.1	21.8	19.7	32.5	52.2	2092
2000	2.5	6.6	18.0	22.1	20.4	30.4	50.8	2035
2001	3.4	7.4	18.4	21.5	19.8	29.4	49.2	1892
2002	3.3	5.3	18.4	19.3	20.7	32.9	53.6	1896

Females

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	2.1	6.4	19.7	23.0	23.5	25.3	48.8	3493
1992	1.2	6.5	18.8	22.7	21.9	28.9	50.8	3656
1993	1.5	6.1	17.4	22.3	23.2	29.4	52.6	3658
1994	1.5	5.7	17.4	21.1	22.0	32.3	54.3	3480
1995	1.7	5.7	17.3	21.6	22.1	31.6	53.7	3334
1996	1.8	5.2	15.7	23.2	22.6	31.6	54.1	3499
1997	1.2	6.7	16.3	20.0	22.1	33.7	55.8	2388
1998	1.8	5.3	17.2	20.5	22.3	32.9	55.2	2346
1999	1.6	6.2	19.0	22.8	23.1	27.2	50.3	2333
2000	1.9	7.3	19.6	22.0	22.7	26.5	49.1	2190
2001	2.0	6.6	18.5	21.9	22.7	28.3	51.0	2278
2002	2.1	6.9	18.8	22.8	20.5	28.9	49.4	2133

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1989								
1990								
1991	2.2	8.3	20.9	24.9	19.0	24.7	43.9	3103
1992	1.9	6.7	21.3	23.7	21.1	25.4	44.7	2951
1993	2.3	7.5	19.8	23.0	20.0	27.4	43.0	3169
1994	2.1	6.6	21.5	22.7	21.0	26.1	43.6	3333
1995	2.4	6.5	20.2	22.6	19.7	28.6	42.3	3563
1996	2.2	7.8	20.5	22.9	20.1	26.4	43.0	3161
1997	2.7	7.8	20.9	22.4	19.9	26.3	42.3	2019
1998	2.7	6.4	20.3	24.7	20.0	25.9	44.7	2036
1999	2.6	8.2	21.6	23.9	21.8	22.0	45.7	1953
2000	2.4	6.9	23.3	25.7	19.6	22.1	45.3	2043
2001	3.2	8.7	23.2	23.5	19.0	22.5	42.5	1976
2002	2.8	8.1	23.7	25.5	18.7	21.2	44.2	1951

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N
1990								
1989								
1991	0.9	8.2	25.6	22.8	20.3	22.1	42.4	3395
1992	1.2	6.7	23.3	23.9	20.8	24.1	44.9	3261
1993	1.0	6.4	22.3	24.0	21.0	25.2	46.2	3440
1994	1.0	7.0	21.1	24.3	21.1	25.5	46.6	3493
1995	1.4	5.5	20.9	24.0	22.4	25.8	48.2	3669
1996	1.4	6.8	20.3	25.2	21.8	24.4	46.2	3383
1997	1.5	6.9	20.8	24.4	19.9	26.4	46.4	2402
1998	1.4	5.8	23.0	24.0	20.4	25.4	45.8	2292
1999	1.3	8.3	23.7	24.1	21.2	21.4	42.5	2107
2000	1.1	8.0	22.5	25.7	21.7	21.0	42.7	2120
2001	0.9	7.3	23.8	25.8	20.9	21.3	42.2	2164
2002	2.2	7.4	24.1	27.4	19.8	19.0	38.8	2175

TABLE 11 (Cont.)

Males

Females

	12th Grade								12th Grade								
	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Every Day	Wtd N	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Every Day	Wtd N	
					Every Day								Every Day or More				Every Day or More
1979	0.7	6.6	22.5	23.1	23.3	23.8	47.1	1344	1979	0.8	5.9	24.3	22.9	24.6	21.5	46.0	1416
1980	1.2	5.3	23.0	23.3	22.2	25.0	47.2	1352	1980	0.5	8.2	24.3	22.6	23.3	21.0	44.4	1422
1981	1.2	5.7	20.3	25.9	23.1	23.8	46.9	1493	1981	1.4	7.4	22.9	24.6	22.5	21.2	43.7	1587
1982	1.2	6.8	20.7	27.2	20.9	23.3	44.1	1512	1982	0.8	8.7	27.6	24.7	19.2	19.0	38.2	1549
1983	2.3	6.4	24.2	25.3	20.8	21.0	41.9	1352	1983	1.4	9.0	28.2	23.8	21.4	16.1	37.5	1436
1984	2.1	10.0	23.3	22.3	20.2	22.1	42.3	1348	1984	0.7	10.3	27.4	25.0	19.8	16.7	36.5	1396
1985	2.1	10.6	23.8	24.0	20.3	19.2	39.5	1321	1985	2.5	10.3	25.9	25.0	20.2	16.1	36.3	1455
1986	2.0	10.8	26.7	22.5	18.2	19.9	38.1	1240	1986	1.4	9.5	30.4	23.7	18.7	16.3	35.0	1435
1987	2.1	8.9	26.6	24.3	20.3	17.9	38.1	1290	1987	1.6	9.5	29.4	24.3	18.0	17.3	35.3	1475
1988	2.9	9.0	26.3	23.8	18.7	19.3	38.0	1320	1988	2.1	11.6	26.1	25.7	18.6	15.9	34.5	1460
1989	2.8	7.5	28.8	23.2	16.7	21.0	37.8	1149	1989	2.5	9.5	31.0	26.4	16.9	13.6	30.5	1267
1990	2.6	9.1	26.3	23.9	18.8	19.3	38.2	1114	1990	1.5	10.4	27.4	25.2	18.7	16.7	35.4	1029
1991	2.5	9.8	28.4	25.8	18.0	15.4	33.4	1062	1991	1.1	8.7	27.2	24.8	19.7	18.5	38.2	1076
1992	3.0	8.4	24.7	23.4	19.9	20.7	40.6	1008	1992	1.6	8.8	25.4	23.2	17.6	23.4	41.0	1161
1993	3.4	9.5	23.9	25.0	16.9	21.5	38.3	1023	1993	1.9	9.3	22.2	26.5	18.8	21.4	40.1	1131
1994	3.0	10.1	25.5	26.1	18.8	16.4	35.2	987	1994	1.1	7.2	26.3	25.2	19.4	20.9	40.3	1113
1995	3.2	9.1	26.2	25.8	17.6	18.2	35.8	1001	1995	1.1	6.6	25.3	26.4	20.1	20.5	40.6	1138
1996	3.2	9.3	27.0	22.9	18.2	19.4	37.6	925	1996	1.6	7.3	27.1	25.5	18.6	19.9	38.5	1032
1997	4.1	9.2	25.3	24.8	16.7	19.9	36.6	951	1997	1.6	8.3	26.0	24.7	21.6	17.7	39.4	1119
1998	2.9	7.9	23.8	25.7	18.1	21.5	39.6	988	1998	1.1	6.4	28.8	29.0	16.9	17.9	34.7	1083
1999	2.4	9.6	28.8	26.2	14.9	18.1	33.0	910	1999	1.5	10.4	24.4	27.8	20.5	15.4	35.9	954
2000	3.2	10.1	23.8	28.3	16.4	18.2	34.6	752	2000	1.4	8.4	26.1	27.9	20.6	15.7	36.2	900
2001	3.1	9.1	26.2	25.5	18.6	17.5	36.0	855	2001	1.4	11.1	25.9	27.1	18.6	15.8	34.5	917
2002	3.4	9.8	26.2	27.3	18.6	14.6	33.2	911	2002	1.7	7.5	25.9	28.9	19.3	16.6	35.9	916

TABLE 12
Trends in Frequency of Getting 7 Hours of Sleep per Day: 8th, 10th, and 12th Graders

Males

Females

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	3.1	5.6	8.4	12.8	23.1	47.1	70.1	3372
1992	2.5	5.6	9.1	14.4	20.9	47.5	68.4	3228
1993	3.1	6.5	8.2	13.0	21.5	47.7	69.2	3415
1994	3.4	6.8	10.1	13.4	20.8	45.5	66.3	3156
1995	2.7	5.9	9.8	13.1	20.1	48.4	68.5	3034
1996	2.7	6.3	9.7	12.4	21.6	47.3	68.9	3314
1997	3.3	6.0	8.8	15.2	21.9	44.7	66.6	2189
1998	3.3	7.4	11.2	15.1	20.6	42.2	62.8	2203
1999	3.9	6.4	11.8	14.3	20.0	43.6	63.6	2106
2000	4.2	7.6	12.1	14.2	22.6	39.2	61.8	2044
2001	5.3	9.0	12.1	14.2	21.2	38.2	59.4	1899
2002	4.5	5.7	12.7	14.3	20.6	42.2	62.8	1908

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	2.0	6.8	12.6	16.1	25.3	37.3	62.5	3504
1992	2.3	7.7	12.1	16.2	24.6	37.1	61.7	3655
1993	2.5	7.5	13.1	15.9	23.4	37.5	60.9	3672
1994	2.3	7.4	12.9	17.2	23.3	36.9	60.2	3506
1995	2.2	7.7	13.0	16.6	24.3	36.3	60.6	3337
1996	3.7	7.6	14.0	15.2	24.6	34.9	59.5	3538
1997	3.0	7.8	14.5	17.5	22.4	34.9	57.3	2391
1998	3.0	9.4	15.6	16.4	21.3	34.4	55.6	2353
1999	2.5	8.3	13.6	18.0	24.2	33.4	57.5	2345
2000	3.6	8.4	16.6	16.8	22.1	32.5	54.7	2194
2001	3.2	9.0	16.7	19.0	20.8	31.3	52.1	2277
2002	3.0	10.0	15.7	18.5	22.0	30.8	52.8	2142

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	2.8	8.4	12.8	17.5	24.4	34.0	58.5	3115
1992	2.3	7.2	13.1	17.9	26.1	33.4	59.5	2950
1993	3.0	8.7	12.2	17.6	25.5	33.0	58.5	3200
1994	3.6	8.9	14.3	18.4	23.9	30.9	54.8	3351
1995	2.9	8.8	14.5	17.8	24.2	31.8	56.0	3588
1996	3.0	9.6	14.2	17.9	22.7	32.6	55.3	3199
1997	3.8	10.9	14.3	18.4	22.3	30.3	52.6	2034
1998	4.1	10.4	17.0	19.1	21.9	27.6	49.5	2046
1999	4.0	10.4	17.0	18.5	23.5	26.6	50.1	1961
2000	4.1	11.6	16.2	17.1	20.5	30.5	50.9	2052
2001	4.5	12.7	17.3	18.1	22.4	25.0	47.4	1987
2002	5.2	10.8	17.9	17.6	21.7	26.9	48.6	1969

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	2.1	11.6	17.1	21.9	23.6	23.6	47.3	3409
1992	2.5	11.3	17.1	22.6	23.4	23.1	46.5	3271
1993	2.7	10.8	19.7	21.4	23.0	22.4	45.4	3453
1994	2.9	11.4	20.3	20.1	22.6	22.7	45.2	3516
1995	2.8	13.5	19.1	20.7	22.6	21.2	43.8	3692
1996	3.1	13.6	20.8	19.9	21.3	21.2	42.6	3409
1997	3.3	15.1	20.6	20.3	21.0	19.8	40.8	2405
1998	5.0	14.4	21.0	20.1	19.7	19.8	39.4	2299
1999	4.1	15.7	22.0	21.7	18.8	17.6	36.4	2137
2000	4.0	14.3	21.1	20.0	21.4	19.2	40.6	2134
2001	3.9	16.8	21.8	22.6	19.2	15.7	34.9	2172
2002	3.7	16.9	22.2	20.8	19.1	17.3	36.4	2187

TABLE 12 (Cont.)

Males

Females

12th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every	Nearly	Wtd N
					Every Day	Day	Every Day	
1979	1.3	7.9	16.2	22.5	28.4	23.8	52.2	1339
1980	1.4	8.2	16.2	25.0	25.3	23.9	49.2	1363
1981	2.5	8.3	15.4	21.7	27.9	24.2	52.1	1503
1982	2.1	8.2	16.1	22.5	25.1	26.0	51.1	1512
1983	2.5	8.7	15.4	23.7	25.2	24.6	49.8	1357
1984	1.9	10.3	16.5	23.8	23.3	24.1	47.4	1344
1985	3.9	9.8	18.5	23.2	24.8	19.7	44.5	1320
1986	3.0	10.9	18.9	23.3	21.0	23.0	43.9	1232
1987	2.2	12.8	21.5	21.4	21.5	20.6	42.1	1293
1988	3.7	11.2	18.8	21.2	23.5	21.6	45.0	1317
1989	4.4	13.5	18.2	21.9	21.3	20.7	42.0	1148
1990	3.0	14.7	18.5	21.8	22.7	19.3	42.0	1116
1991	2.6	13.6	19.2	24.0	21.4	19.2	40.6	1060
1992	4.0	12.4	16.5	22.9	22.6	21.6	44.2	1013
1993	3.4	11.9	19.1	21.1	23.4	21.1	44.5	1023
1994	4.7	14.3	20.2	20.8	22.6	17.4	40.0	984
1995	5.6	15.1	17.8	21.0	20.7	19.9	40.5	993
1996	6.3	15.2	22.2	19.5	20.5	16.1	36.7	920
1997	4.7	15.7	21.6	23.9	18.0	16.1	34.1	946
1998	5.7	18.4	18.9	21.6	18.8	16.6	35.4	987
1999	4.3	17.2	20.9	21.1	20.1	16.4	36.6	916
2000	8.3	15.4	22.5	22.1	18.0	13.7	31.7	757
2001	6.2	20.9	20.3	17.6	18.2	16.8	35.0	857
2002	5.9	17.5	21.4	23.9	15.7	15.5	31.3	916

12th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every	Nearly	Wtd N
					Every Day	Day	Every Day	
1979	1.2	9.9	17.6	24.4	27.0	19.9	46.9	1414
1980	1.2	9.3	18.8	23.9	27.2	19.6	46.8	1425
1981	1.5	8.4	17.8	27.1	25.6	19.7	45.3	1590
1982	1.5	12.2	19.6	24.8	23.4	18.5	41.9	1557
1983	1.8	11.2	19.3	24.4	23.7	19.6	43.3	1442
1984	1.3	12.6	21.2	24.0	22.4	18.6	41.0	1396
1985	2.6	12.3	20.3	25.1	22.1	17.5	39.7	1458
1986	1.7	13.6	22.2	21.5	24.3	16.7	41.0	1429
1987	2.4	15.5	23.1	23.4	19.6	16.1	35.7	1480
1988	3.7	18.6	24.3	21.0	18.5	13.9	32.4	1453
1989	2.8	16.2	21.7	23.2	18.7	17.5	36.2	1274
1990	2.9	16.4	23.2	23.1	19.3	15.1	34.4	1026
1991	3.5	17.0	24.4	22.5	18.3	14.3	32.6	1074
1992	3.3	16.6	22.9	23.3	17.0	17.0	34.0	1161
1993	3.7	15.4	24.9	22.1	17.7	16.2	33.9	1131
1994	3.9	19.8	25.8	20.7	19.1	10.7	29.7	1119
1995	3.0	18.3	25.3	21.9	18.6	12.9	31.4	1142
1996	3.9	20.8	27.7	18.8	16.2	12.6	28.8	1028
1997	4.8	20.0	22.0	23.2	16.2	13.8	29.9	1123
1998	4.7	19.3	26.5	23.3	15.9	10.4	26.2	1083
1999	5.0	20.7	23.1	22.2	16.8	12.1	29.0	957
2000	4.5	23.9	23.3	22.4	15.1	10.8	25.9	900
2001	6.3	25.6	23.5	22.8	11.5	10.3	21.8	915
2002	7.0	21.0	27.6	23.9	13.2	7.3	20.5	915

TABLE 13
Trends in Frequency of Respondents Saying They Get Less Sleep Than They Should: 8th, 10th, and 12th Graders

Males

Females

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	23.3	20.0	23.4	9.2	9.0	15.1	24.1	3383
1992	22.8	21.2	20.8	9.8	8.4	17.0	25.4	3213
1993	24.3	21.1	21.4	9.4	9.4	14.3	23.7	3418
1994	22.7	20.1	21.0	10.7	8.6	16.9	25.5	3167
1995	23.8	20.3	21.0	9.3	9.0	16.7	25.7	3047
1996	24.0	20.0	19.7	10.6	8.3	17.4	25.7	3313
1997	22.6	16.9	22.0	10.8	10.1	17.6	27.7	2185
1998	21.8	17.6	21.2	10.4	9.4	19.7	29.1	2199
1999	22.9	16.6	22.4	11.2	9.1	17.8	26.9	2102
2000	21.5	18.8	21.5	10.4	9.4	18.5	27.8	2042
2001	20.8	17.0	22.0	10.6	9.9	19.7	29.6	1899
2002	21.8	16.1	22.8	10.4	10.3	18.5	28.8	1902

8th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	16.0	21.0	28.5	11.7	9.1	13.7	22.8	3489
1992	17.6	21.9	26.6	11.6	9.7	12.7	22.4	3670
1993	17.5	21.7	26.5	11.7	9.9	12.6	22.5	3685
1994	18.1	21.0	26.8	10.4	10.6	13.1	23.7	3509
1995	18.0	20.3	26.2	12.9	10.8	11.7	22.6	3346
1996	19.3	18.4	27.1	11.9	10.2	13.1	23.3	3535
1997	17.0	20.3	25.4	12.0	11.5	13.8	25.3	2391
1998	16.9	18.9	26.3	12.0	9.8	16.2	26.0	2359
1999	17.6	17.9	26.2	11.5	12.2	14.5	26.7	2346
2000	16.0	17.8	27.2	12.8	10.9	15.3	26.2	2194
2001	17.2	17.5	23.4	12.9	12.6	16.4	29.0	2283
2002	16.3	18.3	26.1	12.5	9.8	17.0	26.8	2142

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	13.3	18.1	24.2	13.2	13.2	18.0	31.2	3120
1992	13.5	18.9	25.5	13.3	12.0	16.9	28.9	2948
1993	13.1	17.6	25.3	12.5	12.1	19.4	31.5	3204
1994	13.1	16.1	24.6	14.6	12.6	19.0	31.6	3339
1995	13.1	17.8	25.8	13.9	12.4	17.1	29.5	3582
1996	13.5	17.7	22.9	12.7	12.0	21.1	33.1	3189
1997	13.9	15.6	23.2	13.2	13.1	20.9	34.1	2034
1998	13.7	13.8	25.1	14.6	12.9	20.0	32.9	2040
1999	12.5	14.5	22.8	14.3	14.8	21.1	35.9	1961
2000	11.2	14.7	20.4	15.2	15.8	22.6	38.4	2059
2001	13.0	16.2	20.9	13.2	15.2	21.5	36.7	1985
2002	12.0	15.8	23.3	13.6	14.0	21.3	35.3	1969

10th Grade

	Never	Seldom	Sometimes	Most Days	Nearly	Every Day	Nearly	Wtd N
					Every Day		Every Day or More	
1989								
1990								
1991	9.6	16.0	28.6	15.3	13.8	16.6	30.5	3411
1992	10.1	17.2	27.2	14.7	14.7	16.1	30.8	3268
1993	10.1	17.0	27.8	14.3	14.0	16.9	30.9	3452
1994	10.4	17.0	28.0	14.9	14.3	15.4	29.7	3516
1995	8.8	15.9	30.1	14.6	13.6	16.9	30.5	3685
1996	10.3	14.6	27.8	15.8	15.1	16.4	31.5	3412
1997	8.5	15.8	26.9	15.9	15.6	17.3	32.9	2400
1998	10.7	13.7	25.3	15.1	16.3	18.8	35.1	2300
1999	9.0	14.0	23.5	15.9	15.8	21.8	37.6	2137
2000	9.5	13.8	24.5	16.3	15.7	20.2	35.9	2138
2001	9.0	15.8	22.9	16.4	16.2	19.8	35.9	2170
2002	9.0	14.4	24.6	16.4	16.1	19.5	35.6	2187

TABLE 13 (Cont.)

Males

Females

	12th Grade							12th Grade									
	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N	Never	Seldom	Sometimes	Most Days	Nearly Every Day	Every Day	Nearly Every Day or More	Wtd N	
1979	7.8	20.7	36.4	16.0	10.1	8.9	19.0	1342	1979	8.7	21.1	35.6	15.8	11.0	7.8	18.8	1409
1980	7.7	20.7	33.4	16.2	11.6	10.4	21.9	1364	1980	8.6	20.6	34.5	17.8	10.1	8.3	18.5	1419
1981	9.1	21.1	31.7	17.1	11.0	10.1	21.1	1496	1981	8.2	21.7	36.1	14.6	9.6	9.9	19.5	1592
1982	8.5	19.6	32.9	16.9	10.9	11.1	22.0	1510	1982	6.5	19.8	37.8	13.9	13.3	8.6	22.0	1555
1983	8.5	20.0	28.7	15.9	14.0	12.8	26.8	1356	1983	10.0	19.1	32.6	15.3	12.8	10.1	23.0	1439
1984	9.5	19.9	30.9	17.1	11.5	11.1	22.6	1346	1984	8.2	19.3	32.6	16.3	13.8	9.9	23.7	1394
1985	8.5	19.3	30.0	17.0	13.5	11.7	25.2	1320	1985	8.1	15.9	33.2	17.1	13.6	12.1	25.7	1456
1986	8.8	17.6	28.3	17.5	14.6	13.2	27.8	1230	1986	7.0	17.3	30.5	18.8	14.6	11.8	26.4	1429
1987	8.3	16.3	26.9	16.8	15.1	16.6	31.7	1291	1987	6.8	15.7	27.2	19.6	17.1	13.7	30.8	1481
1988	7.7	17.7	25.0	17.6	14.3	17.6	32.0	1315	1988	6.7	15.8	25.5	19.8	16.2	16.0	32.3	1455
1989	10.1	15.2	25.6	16.4	13.3	19.4	32.8	1140	1989	7.9	16.4	27.3	18.7	15.4	14.4	29.7	1272
1990	6.5	16.3	28.1	17.0	16.3	15.8	32.1	1111	1990	6.3	14.8	26.8	20.8	16.7	14.6	31.4	1027
1991	7.1	16.0	25.9	18.4	17.5	15.2	32.7	1051	1991	7.6	15.2	25.4	19.1	16.6	16.1	32.8	1065
1992	8.4	14.5	26.5	16.7	16.8	17.1	33.9	1013	1992	7.6	14.8	24.4	18.5	14.5	20.2	34.7	1157
1993	9.5	16.1	26.0	17.8	14.6	16.1	30.6	1018	1993	7.9	14.1	28.2	15.6	16.5	17.7	34.2	1128
1994	7.2	13.3	24.9	17.7	15.5	21.4	36.9	985	1994	4.9	13.9	24.3	19.2	17.4	20.3	37.7	1115
1995	10.0	15.6	23.2	17.5	15.3	18.4	33.8	987	1995	5.2	12.0	27.1	19.6	17.9	18.3	36.2	1138
1996	9.2	13.9	26.8	15.8	16.3	18.0	34.3	916	1996	5.4	11.9	30.9	18.4	16.5	17.0	33.4	1025
1997	8.9	12.6	25.2	18.6	14.3	20.4	34.7	945	1997	7.2	12.2	24.9	17.3	16.9	21.5	38.3	1113
1998	10.5	13.9	22.9	16.9	15.2	20.6	35.8	985	1998	5.4	12.6	26.1	20.4	17.1	18.5	35.6	1080
1999	8.3	13.3	22.2	17.5	19.1	19.6	38.7	915	1999	7.0	11.6	22.0	19.3	18.6	21.5	40.1	954
2000	7.0	11.6	21.1	18.9	18.6	22.9	41.4	752	2000	5.5	14.0	26.1	16.8	16.9	20.8	37.7	899
2001	8.3	11.3	19.7	16.6	19.3	24.7	44.0	855	2001	5.5	13.1	22.0	16.4	19.5	23.5	43.0	913
2002	9.4	11.8	23.2	16.7	15.3	23.6	38.9	917	2002	5.9	13.2	21.5	20.5	17.8	21.1	38.9	915

TABLE 14
Trends in Respondents' Perception of Their Health Relative to Others Over the Past Year: 12th Graders

Males

	Much Poorer Than Average		About Average	Much Better Than Average		Somewhat Better or Much Better Than Average	
	Average	Poorer		Better	Average	Average	Wtd N
1982	2.1	5.7	31.9	34.1	26.2	60.4	1483
1983	2.0	5.1	31.9	33.0	27.9	61.0	1357
1984	1.9	6.0	28.0	33.7	30.3	64.1	1306
1985	1.8	4.6	29.8	33.8	30.0	63.8	1262
1986	2.3	6.0	29.8	29.9	32.0	61.9	1250
1987	2.8	6.4	29.0	30.8	31.1	61.8	1351
1988	2.9	7.2	28.2	31.5	30.3	61.8	1358
1989	2.6	6.1	28.5	32.8	30.0	62.8	1161
1990	3.9	7.2	36.4	28.2	24.3	52.5	1040
1991	3.8	5.6	30.3	32.4	27.9	60.3	1042
1992	3.9	8.6	34.2	27.0	26.4	53.3	1004
1993	3.0	6.3	34.4	28.7	27.5	56.2	1009
1994	2.5	7.9	33.3	27.3	29.1	56.4	981
1995	2.6	8.3	36.2	29.1	23.9	52.9	987
1996	4.1	8.2	34.8	30.1	22.9	53.0	891
1997	3.6	7.5	33.9	29.8	25.2	55.0	897
1998	4.1	7.7	34.4	30.6	23.3	53.9	923
1999	4.2	7.4	35.2	28.1	25.1	53.2	864
2000	3.6	9.3	33.9	27.7	25.5	53.2	792
2001	3.9	9.5	38.0	21.6	27.1	48.7	761
2002	6.0	6.1	38.5	26.5	22.9	49.4	780

Females

	Much Poorer Than Average		About Average	Much Better Than Average		Somewhat Better or Much Better Than Average	
	Average	Poorer		Better	Average	Average	Wtd N
1982	2.7	10.5	42.5	27.2	17.1	44.4	1567
1983	2.4	12.6	41.0	27.1	16.8	43.9	1484
1984	2.6	11.5	42.8	25.5	17.5	43.1	1464
1985	2.7	10.2	42.7	28.5	15.9	44.5	1487
1986	3.3	10.6	45.9	24.4	15.7	40.1	1450
1987	3.8	13.5	43.1	23.7	16.0	39.7	1495
1988	3.5	12.5	44.3	22.2	17.4	39.7	1507
1989	3.3	12.7	43.8	22.8	17.5	40.3	1288
1990	4.9	11.4	48.0	22.4	13.2	35.6	1073
1991	5.9	14.0	45.5	23.1	11.6	34.7	1073
1992	5.1	13.3	48.5	19.3	13.9	33.1	1130
1993	5.3	15.2	45.9	20.1	13.5	33.6	1181
1994	5.7	13.3	46.4	21.1	13.5	34.6	1127
1995	4.7	13.2	48.6	20.5	13.0	33.5	1108
1996	5.0	13.7	45.8	22.5	13.0	35.5	1013
1997	3.9	12.9	52.2	20.9	10.1	31.0	1088
1998	5.9	12.3	46.5	22.4	12.9	35.3	1043
1999	5.7	15.4	49.4	17.2	12.4	29.6	963
2000	6.5	16.3	49.8	17.3	10.1	27.3	837
2001	5.5	13.1	49.0	21.3	11.2	32.4	947
2002	6.2	13.6	50.9	19.6	9.7	29.3	962

TABLE 15
Trends in Number of Hours of Television Viewing per Weekday: 8th, 10th, and 12th Graders

Males

	8th Grade							Mean Hours	Std Dev	Wtd N
	None	1/2 hr. or less	About 1 hr.	About 2 hrs.	About 3 hrs.	About 4 hrs.	5 hrs. or more			
1989										
1990										
1991	1.7	4.3	11.9	22.4	21.5	15.1	23.2	3.11	1.66	8670
1992	1.4	5.0	12.4	20.5	22.1	15.2	23.3	3.11	1.67	8835
1993	1.3	4.7	12.4	20.7	21.5	15.7	23.8	3.13	1.67	8679
1994	1.5	5.6	13.2	20.9	21.1	14.6	23.0	3.05	1.69	8378
1995	1.9	6.0	13.0	20.7	20.2	16.1	22.1	3.03	1.69	8228
1996	1.6	5.7	13.8	20.2	21.1	14.4	23.2	3.04	1.70	8531
1997	1.6	6.0	14.3	21.2	21.3	14.7	20.9	2.96	1.68	8738
1998	2.2	6.1	13.3	21.2	21.0	14.0	22.2	2.99	1.70	8764
1999	1.6	5.9	14.1	21.0	20.3	13.6	23.6	3.03	1.72	7955
2000	1.7	6.4	15.0	21.4	19.7	14.2	21.6	2.95	1.71	8061
2001	2.4	7.5	15.1	21.2	19.5	13.4	20.8	2.87	1.73	7692
2002	2.0	6.9	16.3	22.0	19.2	11.9	21.7	2.87	1.73	7151

Females

	8th Grade							Mean Hours	Std Dev	Wtd N
	None	1/2 hr. or less	About 1 hr.	About 2 hrs.	About 3 hrs.	About 4 hrs.	5 hrs. or more			
1989										
1990										
1991	1.7	7.1	14.3	23.0	20.2	14.6	19.0	2.86	1.67	8645
1992	2.1	6.5	14.0	22.5	20.7	14.3	20.0	2.90	1.68	9346
1993	1.8	6.8	14.4	22.1	20.3	14.1	20.4	2.91	1.69	9285
1994	2.1	7.3	14.2	22.0	21.3	13.3	19.8	2.87	1.69	8658
1995	2.0	7.4	14.0	22.3	20.0	14.0	20.5	2.89	1.70	8782
1996	1.7	7.8	15.3	22.4	20.7	12.4	19.6	2.82	1.69	8987
1997	2.4	8.6	15.6	23.3	19.8	12.1	18.1	2.72	1.69	9412
1998	2.3	8.2	16.0	22.5	20.1	12.8	18.1	2.75	1.69	9089
1999	2.1	8.2	15.4	22.6	20.5	12.6	18.6	2.78	1.69	8552
2000	2.4	9.3	16.2	22.8	19.8	12.1	17.4	2.68	1.69	8490
2001	2.7	9.3	16.8	22.3	17.8	11.7	19.3	2.71	1.74	8390
2002	2.9	10.0	17.6	21.4	19.0	12.0	17.2	2.63	1.72	7694

10th Grade

	10th Grade							Mean Hours	Std Dev	Wtd N
	None	1/2 hr. or less	About 1 hr.	About 2 hrs.	About 3 hrs.	About 4 hrs.	5 hrs. or more			
1989										
1990										
1991	1.4	7.5	16.4	22.9	22.7	12.9	16.2	2.73	1.62	7254
1992	1.6	7.3	17.2	23.4	21.3	14.0	15.1	2.69	1.61	7075
1993	1.9	7.8	17.9	24.5	20.7	12.9	14.4	2.62	1.60	7331
1994	2.0	8.4	18.5	24.4	20.3	12.0	14.5	2.59	1.62	7727
1995	2.5	8.8	18.2	24.6	19.6	12.5	13.8	2.55	1.62	8368
1996	2.2	8.3	17.7	25.3	20.7	12.4	13.3	2.56	1.59	7574
1997	2.5	9.0	17.7	25.0	19.9	12.0	13.9	2.55	1.62	7477
1998	2.5	9.4	17.2	22.7	19.7	12.9	15.6	2.62	1.66	7169
1999	2.2	10.1	17.4	24.6	18.3	12.1	15.4	2.58	1.66	6379
2000	2.6	9.6	17.6	24.5	18.6	11.9	15.1	2.57	1.66	6831
2001	2.4	10.0	19.0	23.5	19.2	11.3	14.7	2.53	1.65	6651
2002	2.5	9.8	18.3	22.6	18.6	12.2	16.1	2.60	1.69	6970

10th Grade

	10th Grade							Mean Hours	Std Dev	Wtd N
	None	1/2 hr. or less	About 1 hr.	About 2 hrs.	About 3 hrs.	About 4 hrs.	5 hrs. or more			
1989										
1990										
1991	3.3	10.1	18.7	22.7	18.4	12.2	14.6	2.52	1.67	7421
1992	2.8	10.5	19.1	23.5	18.4	12.0	13.7	2.48	1.65	7423
1993	3.4	11.3	18.7	23.3	18.4	11.4	13.4	2.44	1.65	7729
1994	3.1	12.3	19.6	23.1	16.5	11.0	14.4	2.43	1.69	7906
1995	3.5	12.2	19.7	23.6	18.1	10.5	12.4	2.35	1.63	8427
1996	3.2	11.8	20.0	23.2	18.3	11.2	12.3	2.38	1.63	7819
1997	3.3	13.6	19.5	24.1	17.3	9.8	12.4	2.31	1.64	7816
1998	3.1	12.1	19.3	23.8	17.9	10.9	12.9	2.39	1.64	7776
1999	3.7	12.6	20.2	23.8	17.7	9.4	12.7	2.33	1.64	7073
2000	4.1	13.5	21.4	23.8	16.3	9.5	11.4	2.23	1.62	7287
2001	3.9	14.2	21.9	23.6	16.2	9.4	10.8	2.19	1.61	7186
2002	3.5	14.2	19.2	22.8	16.1	10.7	13.4	2.34	1.68	7190

TABLE 15 (Cont.)

Males

Females

	12th Grade							Mean Hours	Std Dev	Wtd N
	None	1/2 hr. or less	About 1 hr.	About 2 hrs.	About 3 hrs.	About 4 hrs.	5 hrs. or more			
1976	4.7	10.7	19.9	20.6	20.0	11.2	12.9	2.40	1.66	1407
1977	3.5	13.0	22.1	22.4	17.8	10.8	10.4	2.25	1.59	1408
1978	4.5	11.3	21.6	22.3	17.7	12.3	10.3	2.29	1.60	1715
1979	4.3	12.0	22.1	22.3	17.1	12.0	10.3	2.26	1.60	1547
1980	3.6	10.2	22.2	23.6	16.3	12.9	11.1	2.34	1.61	1517
1981	2.5	10.5	20.6	23.7	19.5	11.1	12.1	2.41	1.60	1740
1982	3.2	10.9	20.9	22.0	20.3	11.7	11.0	2.37	1.59	1753
1983	2.2	11.3	20.8	22.0	19.0	13.3	11.3	2.41	1.60	1589
1984	2.3	11.5	21.3	22.6	17.8	12.0	12.6	2.41	1.63	1569
1985	3.8	14.3	19.4	23.1	17.8	11.9	9.8	2.25	1.59	1541
1986	4.0	10.9	21.4	22.8	17.3	12.3	11.3	2.34	1.62	1427
1987	2.8	12.2	22.1	24.3	17.2	10.3	10.9	2.28	1.59	1588
1988	3.6	12.8	22.0	22.0	16.8	10.8	11.9	2.29	1.64	1493
1989	3.2	11.9	20.9	23.0	16.9	11.9	12.1	2.36	1.63	1388
1990	3.8	12.3	21.0	25.0	17.1	11.8	8.9	2.23	1.55	1307
1991	2.9	12.0	21.7	24.1	16.9	10.7	11.8	2.32	1.61	1242
1992	4.0	13.8	19.9	21.5	16.8	10.8	13.3	2.34	1.69	1249
1993	2.7	13.3	18.2	24.0	17.6	11.6	12.6	2.39	1.64	1283
1994	3.3	14.4	21.6	22.0	15.0	11.0	12.8	2.30	1.68	1168
1995	3.0	13.9	22.3	21.8	18.6	9.6	10.8	2.24	1.60	1212
1996	3.6	14.4	21.4	22.9	17.5	8.7	11.5	2.22	1.62	1176
1997	5.2	15.9	20.5	20.2	16.6	8.9	12.7	2.22	1.70	1177
1998	4.1	17.6	23.6	21.0	14.2	9.5	10.0	2.07	1.62	1182
1999	4.7	14.0	20.5	25.9	15.2	10.0	9.7	2.16	1.58	1071
2000	4.7	15.8	24.9	19.7	13.3	9.0	12.7	2.15	1.70	1013
2001	3.4	18.3	20.9	22.1	13.9	8.6	12.8	2.18	1.70	965
2002	4.2	15.0	20.1	24.4	16.0	10.1	10.3	2.19	1.60	942

	12th Grade							Mean Hours	Std Dev	Wtd N
	None	1/2 hr. or less	About 1 hr.	About 2 hrs.	About 3 hrs.	About 4 hrs.	5 hrs. or more			
1976	5.1	9.6	14.3	21.2	19.1	12.9	17.8	2.67	1.75	1470
1977	3.9	12.4	17.4	21.7	16.1	11.9	16.7	2.53	1.75	1614
1978	5.3	12.2	17.8	20.8	16.0	13.1	14.7	2.45	1.74	1857
1979	4.7	12.6	17.3	20.7	17.2	12.8	14.7	2.47	1.73	1639
1980	4.4	12.8	18.6	21.2	17.6	12.5	12.8	2.39	1.68	1606
1981	3.8	13.1	19.6	21.2	16.0	11.7	14.6	2.41	1.72	1760
1982	3.4	10.2	19.7	21.4	18.9	12.7	13.7	2.49	1.66	1746
1983	3.6	10.5	19.1	20.7	19.5	12.3	14.2	2.50	1.68	1627
1984	3.6	12.5	20.5	22.8	17.1	12.0	11.6	2.33	1.63	1534
1985	4.0	13.3	20.1	21.3	17.4	11.0	12.9	2.34	1.68	1592
1986	3.0	13.5	19.4	22.0	18.3	11.3	12.4	2.36	1.65	1560
1987	3.3	13.6	21.5	23.1	17.5	11.2	9.8	2.24	1.58	1657
1988	3.4	15.4	17.9	23.2	17.6	10.2	12.5	2.31	1.66	1711
1989	4.0	14.3	20.7	21.9	15.5	12.4	11.1	2.27	1.65	1372
1990	2.8	13.9	19.6	25.4	14.8	10.4	13.1	2.33	1.66	1221
1991	3.0	14.0	22.8	21.1	16.8	9.3	12.8	2.28	1.67	1224
1992	3.3	14.6	22.0	21.6	16.6	9.8	12.2	2.26	1.65	1371
1993	3.3	16.5	20.7	23.4	16.1	9.4	10.4	2.16	1.61	1401
1994	4.0	15.9	20.7	21.6	18.3	9.0	10.4	2.17	1.61	1364
1995	3.6	14.5	23.2	24.4	16.6	8.5	9.2	2.11	1.55	1291
1996	4.1	16.7	22.0	23.6	15.0	9.1	9.7	2.09	1.59	1145
1997	5.1	15.2	21.0	23.3	14.8	9.5	11.2	2.17	1.65	1308
1998	5.0	15.7	22.1	24.0	14.6	8.5	10.1	2.09	1.61	1262
1999	3.8	17.1	22.2	19.6	19.2	8.4	9.6	2.11	1.60	1108
2000	4.3	18.1	22.0	21.8	15.6	8.5	9.6	2.05	1.60	1051
2001	4.4	18.3	23.6	19.3	15.1	8.9	10.5	2.07	1.65	1068
2002	4.0	16.5	20.9	22.6	15.8	8.1	12.0	2.18	1.66	1093

TABLE 16
Trends in Number of Hours of Television Viewing on the Weekend: 8th and 10th Graders

Males

	8th Grade								Mean Hours	Std Dev	Wtd N
	None	Less than 1 Hour	1-2 Hours	3-4 Hours	5-6 Hours	7-8 Hours	9 Hours or more				
	1991	1.4	5.0	12.1	21.5	23.0	14.8	22.2			
1992	1.4	4.4	12.2	22.2	22.7	14.0	23.1	5.48	2.94	8868	
1993	1.4	4.5	11.5	23.3	21.9	13.9	23.5	5.49	2.94	8705	
1994	1.4	4.9	12.0	22.1	21.5	14.5	23.6	5.49	2.97	8389	
1995	1.6	5.2	12.8	22.1	21.9	13.7	22.7	5.38	2.98	8251	
1996	1.7	5.5	13.4	21.5	21.5	13.7	22.7	5.35	3.01	8548	
1997	1.4	5.8	12.4	23.3	22.1	14.5	20.4	5.27	2.93	8774	
1998	1.7	5.3	12.9	22.9	21.6	13.4	22.1	5.32	2.98	8785	
1999	1.8	5.7	13.2	23.4	21.2	12.6	22.1	5.26	3.00	7983	
2000	1.7	5.8	12.9	24.2	22.0	12.3	21.1	5.20	2.96	8078	
2001	2.0	5.7	13.7	23.7	20.9	12.5	21.5	5.19	3.00	7702	
2002	1.9	5.2	14.0	24.5	20.8	13.2	20.3	5.16	2.96	7165	

	10th Grade								Mean Hours	Std Dev	Wtd N
	None	Less than 1 Hour	1-2 Hours	3-4 Hours	5-6 Hours	7-8 Hours	9 Hours or more				
	1991	2.0	6.2	15.6	23.6	23.1	13.5	16.0			
1992	1.8	6.4	15.1	24.1	22.0	14.2	16.4	4.94	2.90	7087	
1993	2.0	6.7	14.7	25.7	22.7	12.9	15.4	4.83	2.86	7338	
1994	2.0	7.0	15.5	24.5	22.6	13.2	15.2	4.80	2.88	7749	
1995	2.3	6.6	15.3	25.3	21.7	13.7	15.1	4.80	2.88	8398	
1996	2.6	6.6	15.9	26.4	21.5	12.6	14.4	4.69	2.86	7588	
1997	2.4	7.5	16.4	26.2	21.9	12.1	13.5	4.60	2.85	7481	
1998	2.5	7.5	16.5	25.4	21.5	11.9	14.7	4.65	2.90	7186	
1999	2.8	7.6	16.9	26.5	21.0	11.4	13.7	4.53	2.87	6393	
2000	2.4	7.8	16.3	25.2	22.0	11.4	14.8	4.64	2.90	6859	
2001	2.3	7.7	16.9	26.0	21.4	10.8	14.9	4.60	2.89	6665	
2002	2.5	7.8	16.1	26.1	20.5	12.0	14.9	4.64	2.91	6981	

Females

	8th Grade								Mean Hours	Std Dev	Wtd N
	None	Less than 1 Hour	1-2 Hours	3-4 Hours	5-6 Hours	7-8 Hours	9 Hours or more				
	1991	1.6	6.4	17.5	25.0	22.2	11.8	15.4			
1992	2.2	6.8	16.0	26.0	21.0	12.0	15.9	4.76	2.91	9368	
1993	2.0	6.8	16.6	26.1	20.6	11.9	16.0	4.74	2.91	9288	
1994	2.3	6.9	15.8	26.3	20.6	11.4	16.7	4.77	2.93	8666	
1995	2.2	7.3	16.7	25.8	21.2	11.7	15.1	4.67	2.90	8804	
1996	1.8	7.4	17.3	25.1	21.3	11.9	15.2	4.68	2.90	9013	
1997	2.1	7.3	17.2	25.5	21.3	12.2	14.4	4.64	2.88	9430	
1998	1.8	6.6	15.3	27.3	21.4	12.2	15.5	4.78	2.86	9108	
1999	2.4	7.1	16.7	25.8	21.9	11.4	14.7	4.65	2.88	8562	
2000	1.9	7.6	17.0	25.9	20.8	11.7	15.1	4.65	2.90	8504	
2001	2.0	7.3	16.3	26.3	20.1	12.0	16.0	4.73	2.92	8398	
2002	2.1	6.9	17.4	25.5	21.1	11.9	14.9	4.66	2.89	7713	

	10th Grade								Mean Hours	Std Dev	Wtd N
	None	Less than 1 Hour	1-2 Hours	3-4 Hours	5-6 Hours	7-8 Hours	9 Hours or more				
	1991	2.6	8.6	19.6	27.2	20.2	10.4	11.3			
1992	2.7	9.3	19.4	27.5	19.3	10.4	11.3	4.22	2.82	7425	
1993	3.0	9.8	19.2	27.4	20.0	9.6	11.0	4.17	2.81	7736	
1994	3.0	9.3	19.0	26.7	20.1	10.8	11.1	4.23	2.82	7912	
1995	3.5	9.9	19.5	28.0	19.8	9.6	9.6	4.05	2.76	8430	
1996	2.7	9.6	19.7	27.1	21.4	10.1	9.4	4.12	2.73	7834	
1997	3.1	10.0	21.0	27.0	19.3	9.5	10.1	4.04	2.78	7824	
1998	3.2	9.6	20.3	27.8	20.1	9.4	9.6	4.04	2.74	7784	
1999	3.0	10.7	19.7	27.6	19.4	9.5	10.1	4.05	2.78	7078	
2000	3.5	9.9	21.3	27.5	18.7	9.6	9.5	3.98	2.76	7299	
2001	3.4	10.0	21.0	27.9	19.3	8.9	9.5	3.97	2.75	7193	
2002	2.6	10.3	19.9	26.8	18.8	10.2	11.4	4.17	2.84	7190	

TABLE 17
Trends in Mean Hours per Week of Computer Use, Not for School or Work: 8th, 10th, and 12th Graders

Males

8th Grade										
	None	1/2 hr. or less	1-2 hrs.	3-5 hrs.	6-9 hrs.	10-19 hrs.	20 or more hrs.	Mean Hours	Std Dev	Wtd N
1997	25.9	14.5	19.6	17.0	8.8	4.6	9.6	4.27	6.17	2080
1998	22.9	15.2	18.8	18.1	9.9	4.7	10.4	4.56	6.29	2204
1999	21.4	12.8	19.9	17.7	11.5	6.9	9.9	4.88	6.31	2025
2000	15.2	12.1	21.0	20.8	12.9	7.1	10.9	5.37	6.39	2005
2001	14.1	10.1	18.1	21.6	15.9	8.5	11.7	5.94	6.51	1921
2002	14.7	10.2	19.0	22.5	13.5	7.6	12.5	5.84	6.61	1930

10th Grade										
	None	1/2 hr. or less	1-2 hrs.	3-5 hrs.	6-9 hrs.	10-19 hrs.	20 or more hrs.	Mean Hours	Std Dev	Wtd N
1997	28.8	17.7	18.5	15.5	8.6	5.1	5.9	3.51	5.44	2206
1998	27.1	15.7	18.6	16.6	9.1	5.1	7.8	3.98	5.86	2052
1999	22.0	15.1	19.4	17.7	11.0	6.7	8.2	4.48	6.01	1825
2000	17.2	13.6	17.7	20.6	12.4	8.1	10.4	5.32	6.41	1920
2001	13.6	12.1	18.1	21.3	14.2	9.6	11.1	5.85	6.50	1916
2002	12.1	11.3	20.2	19.1	14.3	9.7	13.3	6.25	6.80	2094

12th Grade										
	None	1/2 hr. or less	1-2 hrs.	3-5 hrs.	6-9 hrs.	10-19 hrs.	20 or more hrs.	Mean Hours	Std Dev	Wtd N
1997	29.6	19.2	20.1	11.9	8.9	4.7	5.5	3.29	5.34	1040
1998	27.3	20.0	15.7	16.5	8.7	4.7	7.1	3.72	5.70	987
1999	18.0	17.5	17.4	20.9	12.0	6.0	8.2	4.57	5.93	923
2000	15.8	12.0	20.1	19.0	13.5	9.6	10.1	5.52	6.41	776
2001	12.2	9.0	20.0	20.1	16.0	9.1	13.7	6.39	6.76	859
2002	11.1	11.7	16.3	22.8	15.2	12.5	10.4	6.22	6.45	825

Females

8th Grade										
	None	1/2 hr. or less	1-2 hrs.	3-5 hrs.	6-9 hrs.	10-19 hrs.	20 or more hrs.	Mean Hours	Std Dev	Wtd N
1997	27.8	23.9	21.8	14.6	6.3	2.4	3.2	2.45	4.27	2373
1998	22.5	20.3	26.3	15.9	7.8	3.9	3.4	2.92	4.55	2355
1999	17.4	18.7	25.4	20.2	9.2	4.7	4.4	3.51	4.93	2320
2000	15.0	15.8	25.7	22.7	10.4	5.3	5.0	3.91	5.11	2210
2001	11.4	14.1	24.2	24.3	13.4	6.9	5.7	4.53	5.36	2172
2002	11.0	12.7	25.1	22.0	14.9	6.6	7.7	4.90	5.74	2120

10th Grade										
	None	1/2 hr. or less	1-2 hrs.	3-5 hrs.	6-9 hrs.	10-19 hrs.	20 or more hrs.	Mean Hours	Std Dev	Wtd N
1997	33.2	24.3	23.2	11.9	3.7	1.9	1.8	1.81	3.52	2288
1998	25.8	21.3	25.2	16.3	6.5	2.7	2.3	2.43	3.96	2324
1999	21.0	21.8	23.3	19.0	9.2	2.9	2.9	2.87	4.27	2161
2000	17.4	20.7	20.3	21.5	9.9	6.2	4.0	3.68	5.00	2261
2001	14.5	14.3	24.7	21.9	12.4	7.3	4.8	4.25	5.25	2213
2002	10.4	17.1	25.5	22.4	11.9	7.1	5.6	4.38	5.39	2093

12th Grade										
	None	1/2 hr. or less	1-2 hrs.	3-5 hrs.	6-9 hrs.	10-19 hrs.	20 or more hrs.	Mean Hours	Std Dev	Wtd N
1997	31.3	23.7	23.0	10.6	5.7	2.5	3.1	2.27	4.26	1105
1998	23.7	23.0	24.3	15.5	7.8	3.9	1.7	2.56	4.01	1108
1999	17.7	20.6	28.5	19.2	7.1	3.8	3.0	2.96	4.38	1005
2000	15.0	19.7	24.3	16.3	12.4	8.5	3.7	3.98	5.19	975
2001	11.0	14.7	27.2	23.8	12.5	5.2	5.6	4.21	5.19	1068
2002	14.0	16.6	24.9	21.4	12.1	7.0	4.1	4.02	5.07	1093

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