Missouri High School Survey
Trend Analysis Report

Total
Injury and Violence

														Health Risk Behavior and Percentages	Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QN8: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
		31.0	29.1	23.8	19.1	15.5	12.2	11.8	11.9		11.4	8.1	9.0	Decreased, 1995-2017	Decreased, 1995-2005 Decreased, 2005-2017	No change

QN9: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
		45.2	39.8	35.1	32.6	31.7	25.0	27.8	24.6		19.3	18.5	15.7	Decreased, 1995-2017	No quadratic change	No change

QN10: Percentage of students who drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
											8.9	6.8	5.3	Decreased, 2013-2017	Not available§	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Injury and Violence

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN11: Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)

| | | | | | | | | | | | 46.0 | 47.0 | 46.4 | No linear change | Not available§ | No change |

QN12: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

| | | 25.9 | 20.9 | 20.8 | 20.2 | 16.8 | 19.4 | 18.6 | 16.0 | | 22.2 | 22.1 | 19.8 | No linear change | Decreased, 1995-2003 Increased, 2003-2017 | No change |

QN13: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | 5.9 | 4.2 | | No linear change | Not available | No change |

QN15: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | 6.1 | 6.4 | | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Injury and Violence

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN19: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
					7.2	9.3	7.3	10.3	8.1		10.2	8.4	10.2	No linear change	No quadratic change	No change

QN22: Percentage of students who experienced physical dating violence (being physically hurt on purpose by someone they were dating or going out with [counting such things as being hit, slammed into something, or injured with an object or weapon] one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											9.6	11.7	10.4	No linear change	Not available[§]	No change

QN23: Percentage of students who were bullied on school property (ever during the 12 months before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
									22.8		25.2	21.4	23.3	No linear change	Not available	No change

QN24: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												16.6	19.4	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Injury and Violence

						Health Risk Behavior and Percentages								Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN25: Percentage of students who felt sad or hopeless (almost every day for >=2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)

| | | | | 24.2 | 28.5 | 26.0 | 25.5 | 23.6 | 27.1 | | 27.3 | 27.5 | 31.3 | Increased, 1999-2017 | No quadratic change | No change |

QN26: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)

| | | 24.5 | 22.2 | 15.6 | 19.2 | 16.8 | 15.3 | 14.8 | 15.4 | | 14.2 | 16.2 | 20.9 | Decreased, 1995-2017 | Decreased, 1995-2013 / Increased, 2013-2017 | Increased |

QN27: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)

| | | 19.6 | 15.6 | 12.4 | 14.3 | 12.9 | 11.0 | 10.1 | 11.3 | | 12.1 | 13.4 | 15.5 | Decreased, 1995-2017 | Decreased, 1995-2007 / Increased, 2007-2017 | No change |

QN28: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)

| | | 9.0 | 9.1 | 5.2 | 8.4 | 7.3 | 7.1 | 7.9 | 6.4 | | 6.9 | 9.8 | 8.6 | No linear change | Decreased, 1995-1999 / No change, 1999-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Total
Injury and Violence

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
				Health Risk Behavior and Percentages												
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN29: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)

		3.3	3.0	2.2	1.9	2.0	1.8	2.0	2.5		1.9	3.2	2.9	No linear change	Decreased, 1995-2001 No change, 2001-2017	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Total Tobacco Use

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN30: Percentage of students who ever tried cigarette smoking (even one or two puffs)

| | | 75.0 | 74.0 | 69.8 | 68.5 | 63.3 | 49.6 | 50.9 | 46.5 | | 39.2 | 34.5 | 28.6 | Decreased, 1995-2017 | No quadratic change | No change |

QN32: Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)

| | | 39.8 | 40.3 | 32.8 | 30.3 | 24.8 | 21.3 | 23.8 | 18.9 | | 14.9 | 11.0 | 9.2 | Decreased, 1995-2017 | No quadratic change | No change |

QNFRCIG: Percentage of students who currently smoked cigarettes frequently (on 20 or more days during the 30 days before the survey)

| | | 20.9 | 22.3 | 16.3 | 18.0 | 13.6 | 10.8 | 11.5 | 6.8 | | 5.5 | 4.2 | 2.7 | Decreased, 1995-2017 | No change, 1995-2001 Decreased, 2001-2017 | No change |

QNDAYCIG: Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)

| | | 16.4 | 17.2 | 12.1 | 13.5 | 10.8 | 8.1 | 8.9 | 5.5 | | 3.9 | 3.1 | 2.0 | Decreased, 1995-2017 | Decreased, 1995-2007 Decreased, 2007-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

**Total
Tobacco Use**

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN34: Percentage of students who ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo])

| | | | | | | | | | | | | 40.6 | 39.9 | No linear change | Not available[§] | No change |

QN35: Percentage of students who currently used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo], on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 22.0 | 10.9 | Decreased, 2015-2017 | Not available | Decreased |

QN38: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)

| | | | 19.4 | 16.4 | 13.3 | 14.7 | 15.0 | 13.5 | | 13.3 | 12.1 | 9.2 | Decreased, 1999-2017 | No quadratic change | No change |

QNTB2: Percentage of students who currently smoked cigarettes or cigars (on at least 1 day during the 30 days before the survey)

| | | | 38.0 | 34.5 | 28.4 | 26.7 | 28.0 | 24.2 | | 21.0 | 17.6 | 13.2 | Decreased, 1999-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Alcohol and Other Drug Use

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN41: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		39.9	33.6	33.5	30.0	25.4	24.2	20.9	20.4		19.5	17.3	18.4	Decreased, 1995-2017	Decreased, 1995-2007 No change, 2007-2017	No change

QN42: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		55.7	51.4	49.9	47.6	49.2	40.8	44.4	39.3		35.6	34.5	32.0	Decreased, 1995-2017	No quadratic change	No change

QN43: Percentage of students who usually got the alcohol they drank by someone giving it to them (during the 30 days before the survey, among students who currently drank alcohol)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
							37.6	41.0			34.0	39.9	42.4	No linear change	Not available[§]	No change

QN48: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		21.8	28.2	25.6	24.4	21.8	18.1	19.0	20.6		20.5	16.3	19.9	Decreased, 1995-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Sexual Behaviors**

				Health Risk Behavior and Percentages										**Linear Change**[*]	**Quadratic Change**[*]	**Change from 2015-2017** [†]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN59: Percentage of students who ever had sexual intercourse

| | | 53.7 | 51.5 | 56.8 | 50.9 | 52.2 | 46.7 | 52.1 | 48.7 | | 43.1 | 37.7 | 41.9 | Decreased, 1995-2017 | No quadratic change | No change |

QN60: Percentage of students who had sexual intercourse for the first time before age 13 years

| | | 8.9 | 8.2 | 9.5 | 6.5 | 7.0 | 5.9 | 6.5 | 5.7 | | 3.9 | 4.1 | 2.5 | Decreased, 1995-2017 | No quadratic change | No change |

QN62: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)

| | | 39.1 | 36.7 | 41.6 | 38.8 | 38.4 | 33.2 | 40.6 | 35.5 | | 32.4 | 27.5 | 32.3 | Decreased, 1995-2017 | No quadratic change | No change |

QN63: Percentage of students who drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)

| | | 29.1 | 26.5 | 25.4 | 25.5 | 27.1 | 23.0 | 21.9 | 23.3 | | 20.7 | 20.4 | 15.5 | Decreased, 1995-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

**Total
Sexual Behaviors**

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
\	\	\	\	Health Risk Behavior and Percentages												
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN64: Percentage of students who used a condom during last sexual intercourse (among students who were currently sexually active)																
		52.1	58.2	59.8	61.5	67.3	67.2	59.3	59.8		58.1	56.4	51.0	No linear change	Increased, 1995-2003 Decreased, 2003-2017	No change
QN65: Percentage of students who used birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)																
		20.9	20.7	20.5	21.2	24.0	18.0	18.9	24.3		16.0	22.9	23.7	No linear change	No quadratic change	No change
QNIUDIMP: Percentage of students who used an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)																
											3.5	4.6	3.9	No linear change	Not available[§]	No change
QNSHPARG: Percentage of students who used a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active))																
											4.8	5.6	6.7	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Sexual Behaviors**

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOTHHPL: Percentage of students who used birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

											24.4	33.0	34.3	Increased, 2013-2017	Not available[§]	No change

QNDUALBC: Percentage of students who used both a condom during last sexual intercourse and birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

											9.5	12.7	12.0	No linear change	Not available	No change

QNBCNONE: Percentage of students who did not use any method to prevent pregnancy during last sexual intercourse (among students who were currently sexually active)

		13.8	14.0	11.1	11.2	5.9	9.9	10.9	8.4		16.2	12.1	12.7	No linear change	Decreased, 1995-2003 Increased, 2003-2017	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOWT: Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

				13.4	14.7	14.9	15.8	14.2	14.3		15.5	13.3	15.7	No linear change	No quadratic change	No change

QNOBESE: Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

				8.9	12.7	12.1	13.8	11.9	14.3		14.9	13.1	16.6	Increased, 1999-2017	No quadratic change	No change

QN70: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)

				20.0	19.9	21.3	21.2	22.1	26.0		29.2	31.3	34.3	Increased, 1999-2017	No change, 1999-2005 Increased, 2005-2017	No change

QN71: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

				16.6	19.6	15.7	14.5	13.1	13.3		14.3	12.8	13.8	Decreased, 1999-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Overweight and obese prevalence estimates for 1999 differ slightly from previously published results because different BMI cut points were used in 1999 than in subsequent years. To make these prevalence estimates comparable, the 1999 prevalence estimates were recalculated using the updated BMI cut points. In addition, beginning in 2017, new, slightly different ranges were used to calculate biologically implausible responses to height and weight questions.

Missouri High School Survey
Trend Analysis Report

Total
Weight Management and Dietary Behaviors

														Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNFR0: Percentage of students who did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				6.6	7.1	7.0	6.0	5.4	7.1		7.6	6.6	7.9	No linear change	No quadratic change	No change

QNFR1: Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 58.3 | 56.8 | 54.3 | 57.5 | 56.9 | 55.9 | | 55.0 | 53.6 | 50.5 | Decreased, 1999-2017 | No quadratic change | No change |

QNFR2: Percentage of students who ate fruit or drank 100% fruit juices two or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 28.5 | 28.6 | 24.7 | 25.9 | 29.1 | 27.8 | | 24.6 | 24.1 | 23.1 | Decreased, 1999-2017 | No quadratic change | No change |

QNFR3: Percentage of students who ate fruit or drank 100% fruit juices three or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 19.8 | 19.0 | 15.6 | 16.2 | 18.1 | 17.8 | | 14.6 | 13.7 | 12.4 | Decreased, 1999-2017 | No quadratic change | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Total
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN72: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				34.8	34.3	32.8	34.4	35.0	37.1		41.5	43.6	45.7	Increased, 1999-2017	No change, 1999-2007 Increased, 2007-2017	No change

QN73: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)

| | | | | 26.8 | 25.1 | 26.7 | 27.0 | 29.2 | 29.0 | | 27.9 | 34.5 | 33.8 | Increased, 1999-2017 | No quadratic change | No change |

QN74: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)

| | | | | 57.6 | 55.9 | 55.9 | 53.6 | 56.7 | 53.0 | | 54.5 | 54.8 | 58.4 | No linear change | No change, 1999-2013 No change, 2013-2017 | No change |

QN75: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)

| | | | | 16.0 | 15.1 | 13.5 | 14.4 | 15.7 | 16.7 | | 21.7 | 17.7 | 19.6 | Increased, 1999-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

14

Missouri High School Survey
Trend Analysis Report

Total
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages															Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNVEG0: Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
				6.2	4.4	4.2	4.7	6.6	6.7		6.3	6.1	8.4	Increased, 1999-2017	No quadratic change	No change

QNVEG1: Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
				61.6	63.4	62.2	62.4	59.5	62.5		58.5	58.0	55.4	Decreased, 1999-2017	No quadratic change	No change

QNVEG2: Percentage of students who ate vegetables two or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
				26.4	27.5	23.4	24.3	24.9	28.5		24.2	21.8	21.9	Decreased, 1999-2017	No quadratic change	No change

QNVEG3: Percentage of students who ate vegetables three or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change*	Quadratic Change*	Change from 2015-2017 †
				12.1	12.5	9.3	11.0	11.3	14.3		11.5	10.5	9.6	No linear change	No quadratic change	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Total
Weight Management and Dietary Behaviors

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN77: Percentage of students who did not drink milk (during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				19.6	15.3	16.8	15.0	18.3	16.7		18.1	20.8	26.0	Increased, 1999-2017	No change, 1999-2013 Increased, 2013-2017	Increased

QNMILK1: Percentage of students who drank one or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | 44.7 | 47.8 | 45.9 | 45.5 | 43.4 | 44.5 | | 38.0 | 36.0 | 28.8 | Decreased, 1999-2017 | No change, 1999-2009
Decreased, 2009-2017 | Decreased |

QNMILK2: Percentage of students who drank two or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | 32.5 | 35.8 | 30.7 | 30.6 | 28.5 | 29.9 | | 23.7 | 22.1 | 16.2 | Decreased, 1999-2017 | Decreased, 1999-2013
Decreased, 2013-2017 | Decreased |

QNMILK3: Percentage of students who drank three or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | 17.8 | 20.2 | 15.8 | 15.9 | 14.3 | 15.8 | | 11.3 | 10.4 | 6.8 | Decreased, 1999-2017 | Decreased, 1999-2013
Decreased, 2013-2017 | Decreased |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Total
Weight Management and Dietary Behaviors

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				
QN78: Percentage of students who did not eat breakfast (during the 7 days before the survey)																	
											14.2	15.5	14.6		No linear change	Not available[§]	No change
QNBK7DAY: Percentage of students who ate breakfast on all 7 days (during the 7 days before the survey)																	
											35.6	30.9	32.2		No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

17

Missouri High School Survey
Trend Analysis Report

**Total
Physical Activity**

					Health Risk Behavior and Percentages									Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN79: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | | 45.4 | 45.7 | 46.2 | No linear change | Not available[§] | No change |

QNPA0DAY: Percentage of students who did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | | 17.1 | 16.4 | 16.7 | No linear change | Not available | No change |

QNPA7DAY: Percentage of students who were physically active at least 60 minutes per day on all 7 days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | | 27.2 | 26.0 | 28.6 | No linear change | Not available | No change |

QN80: Percentage of students who watched television 3 or more hours per day (on an average school day)

| | | | | 40.2 | 38.1 | 32.4 | 33.9 | 29.6 | 32.4 | | 25.6 | 21.2 | 21.1 | Decreased, 1999-2017 | No quadratic change | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Physical Activity**

														Linear Change*	Quadratic Change*	Change from 2015-2017 †
Health Risk Behavior and Percentages																
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN81: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
								21.5	22.9		32.7	37.4	42.3	Increased, 2007-2017	Not available§	No change

QN82: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
		46.7	46.2	50.4	55.9	49.4	49.7	51.2	44.4		46.1	46.0	49.5	No linear change	No quadratic change	No change

QNDLYPE: Percentage of students who attended physical education (PE) classes on all 5 days (in an average week when they were in school)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
		33.9	28.7	20.1	30.0	33.2	31.1	24.1	33.1		30.9	23.0	28.6	No linear change	No quadratic change	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Other

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017[†]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QN86: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)

| | | | | | | | | | | | | 69.2 | 69.9 | | No linear change | Not available[§] | No change |

QNNODNT: Percentage of students who never saw a dentist (for a check-up, exam, teeth cleaning, or other dental work)

| | | | | | | | | | | | | 2.8 | 2.3 | | No linear change | Not available | No change |

QN87: Percentage of students who had ever been told by a doctor or nurse that they had asthma

| | | | | 19.6 | 20.8 | 20.6 | | 24.1 | 22.0 | 26.7 | | | | | Increased, 2005-2017 | No quadratic change | Increased |

QN88: Percentage of students who got 8 or more hours of sleep (on an average school night)

| | | | | | | | | | | | | 27.4 | 20.3 | | Decreased, 2015-2017 | Not available | Decreased |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Site-Added**

														Health Risk Behavior and Percentages	Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN90: Percentage of students who rarely or never wore a bicycle helmet (during the 12 months before the survey, among students who had ridden a bicycle)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		96.0	92.5	91.5	89.8	87.5	88.7	84.8	81.3		86.7	85.7	83.4	Decreased, 1995-2017	Decreased, 1995-2009 No change, 2009-2017	No change

QN91: Percentage of students who rarely or never wear a seat belt when driving (among students who drive a car)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											10.6	7.0	8.9	No linear change	Not available[§]	No change

QN92: Percentage of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey, among students who drove a car or other vehicle)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											54.2	48.6	53.1	No linear change	Not available	No change

QN94: Percentage of students who were injured in a physical fight (one or more times during the 12 months before the survey; injuries had to be treated by a doctor or nurse)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		4.5	4.4	3.9	3.5	3.6	4.0	5.1	3.8		9.3	6.3	4.8	Increased, 1995-2017	No quadratic change	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN97: Percentage of students who tried to quit smoking cigarettes (among students who smoked cigarettes during the 12 months before the survey)

												49.3	50.8	No linear change	Not available[§]	No change

QN100: Percentage of students who ever tried smoking cigars, cigarillos, or little cigars (even one or two puffs)

												23.8	24.7	16.3	Decreased, 2013-2017	Not available	Decreased

QN101: Percentage of students who have ever participated in a program to help them quit using tobacco (among students who have used tobacco)

												11.5	14.1	9.3	No linear change	Not available	No change

QN102: Percentage of students who responded that their school has special groups or classes for students who want to quit using tobacco

												4.0	2.8	4.1	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Site-Added**

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN103: Percentage of students who saw or heard ads about the dangers of cigarette smoking (on TV, the Internet or on the radio, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 78.7 | 77.8 | No linear change | Not available[§] | No change |

QN104: Percentage of students who sometimes, most of the time, or always see ads for tobacco products when they use the Internet

| | | | | | | | | | | | | 32.9 | 40.4 | Increased, 2015-2017 | Not available | Increased |

QN105: Percentage of students who live with someone that smokes cigarettes

| | | | | | | | | | | | 41.4 | 36.5 | 38.1 | No linear change | Not available | No change |

QN106: Percentage of students who were at home when someone was smoking tobacco products (on at least one day during the 7 days before the survey)

| | | | | | | | | | | | | 28.7 | 30.9 | No linear change | Not available | No change |

QN107: Percentage of students who rode in a vehicle where someone was smoking tobacco products (on at least one day during the 7 days before the survey)

| | | | | | | | | | | | | 32.3 | 36.6 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Site-Added

															Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																	
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QN108: Percentage of students who breathed the smoke from someone who was smoking tobacco products in indoor or outdoor public places (such as school buildings, stores, restaurants, stadiums, school grounds, parking lots, and parks, on at least one day during the 7 days before the survey)

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												48.6	50.6	No linear change	Not available[§]	No change

QN109: Percentage of students who breathed the smoke from someone who was smoking tobacco products in the place where they worked (on at least one day during the 7 days before the survey, among students who worked during the 7 days before the survey)

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												21.1	27.1	No linear change	Not available	Increased

QN110: Percentage of students who participated in any community activities to educate the public about the dangers of secondhand smoke (during the 12 months before the survey)

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												8.6	6.4	6.6	No linear change	Not available	No change

QN111: Percentage of students who live in a home where smoking tobacco products is never allowed

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												75.2	73.2	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Site-Added**

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN112: Percentage of students who ride in or drive family vehicles in which smoking tobacco products is never allowed

												69.2	66.5	No linear change	Not available[§]	No change

QN113: Percentage of students who think people should never allow smoking inside their home

												80.1	80.7	No linear change	Not available	No change

QN114: Percentage of students who think people should never allow smoking in their vehicles

												76.1	76.4	No linear change	Not available	No change

QN115: Percentage of students who think employers should never allow smoking in indoor areas in places where people work

												86.0	87.7	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Total
Site-Added

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN117: Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)

| | | | | | | | | | | | 50.4 | 51.2 | 47.6 | No linear change | Not available§ | No change |

QN118: Percentage of students who had been told by a doctor or nurse that they had asthma and who still have asthma

| | | | | | 11.6 | 11.6 | | 12.1 | 11.1 | 13.2 | No linear change | Not available | No change |

QN119: Percentage of students who have ever been taught by a nurse or doctor how to take care of or manage their asthma (among students who have ever had asthma)

| | | | | | | 53.8 | 53.0 | 56.6 | No linear change | Not available | No change |

QN120: Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not counting getting a spray-on tan], one or more times during the 12 months before the survey)

| | | | | | | | 13.3 | 13.0 | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Total
Site-Added**

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN122: Percentage of students who ate dinner at home with at least one of their parents on four or more days (during the 7 days before the survey)

												61.9	58.5	Decreased, 2015-2017	Not available[§]	No change

QN123: Percentage of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement

												59.2	62.0	No linear change	Not available	No change

QN124: Percentage of students who most of the time or always get the kind of help they need (among students who report having felt sad, empty, hopeless, angry, or anxious)

												26.0	26.0	No linear change	Not available	No change

QN125: Percentage of students who participate in school activities one or more hours (such as sports, band, drama, or clubs, during an average week when they are in school)

												67.8	65.5	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Injury and Violence

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
			Health Risk Behavior and Percentages													
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			
QN8: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)																
		39.3	34.9	29.3	24.6	17.7	16.0	13.8	15.1		13.5	11.9	12.0	Decreased, 1995-2017	Decreased, 1995-2005 Decreased, 2005-2017	No change
QN9: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)																
		47.0	39.2	37.1	34.8	30.3	24.6	25.5	25.6		19.2	19.9	16.6	Decreased, 1995-2017	No quadratic change	No change
QN10: Percentage of students who drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)																
											10.8	7.7	6.6	No linear change	Not available[§]	No change
QN11: Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)																
											46.5	46.7	44.5	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Injury and Violence

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN12: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)																
		43.5	34.6	32.6	33.6	27.9	31.3	29.4	25.7		33.2	33.8	27.8	Decreased, 1995-2017	Decreased, 1995-2003 No change, 2003-2017	No change
QN13: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)																
												9.1	5.5	Decreased, 2015-2017	Not available[§]	Decreased
QN15: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)																
												8.0	7.3	No linear change	Not available	No change
QN19: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)																
					4.3	5.6	4.0	6.6	4.4		5.2	4.7	7.1	No linear change	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Injury and Violence

						Health Risk Behavior and Percentages								Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN22: Percentage of students who experienced physical dating violence (being physically hurt on purpose by someone they were dating or going out with [counting such things as being hit, slammed into something, or injured with an object or weapon] one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)

									7.4	12.9	8.8	No linear change	Not available§	No change

QN23: Percentage of students who were bullied on school property (ever during the 12 months before the survey)

					21.2		20.0	19.6	19.5	No linear change	Not available	No change

QN24: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)

							11.7	14.8	No linear change	Not available	No change

QN25: Percentage of students who felt sad or hopeless (almost every day for >=2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)

			19.0	24.1	20.2	19.8	17.5	21.3		16.7	23.6	24.2	No linear change	No quadratic change	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Injury and Violence

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN26: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		19.7	17.5	12.2	15.6	12.2	10.9	10.5	10.6		10.1	13.2	17.5	Decreased, 1995-2017	Decreased, 1995-2009 Increased, 2009-2017	No change

QN27: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)

| | | 16.8 | 12.3 | 11.1 | 10.5 | 9.9 | 8.1 | 7.4 | 8.6 | | 7.5 | 11.0 | 14.2 | Decreased, 1995-2017 | Decreased, 1995-2007 Increased, 2007-2017 | Increased |

QN28: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)

| | | 7.0 | 7.0 | 3.8 | 5.9 | 4.8 | 4.9 | 5.1 | 5.0 | | 5.4 | 9.2 | 8.3 | No linear change | Decreased, 1995-2009 Increased, 2009-2017 | No change |

QN29: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)

| | | 3.0 | 2.5 | 1.4 | 1.5 | 1.4 | 1.4 | 1.2 | 1.6 | | 1.0 | 3.1 | 3.2 | No linear change | Decreased, 1995-2005 Increased, 2005-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Male
Tobacco Use

	Health Risk Behavior and Percentages													Linear Change*	Quadratic Change*	Change from 2015-2017 †

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN30: Percentage of students who ever tried cigarette smoking (even one or two puffs)																
		75.4	74.3	73.2	68.4	61.9	49.9	50.2	46.8		42.0	37.9	27.2	Decreased, 1995-2017	No quadratic change	Decreased
QN32: Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)																
		40.2	39.7	35.6	30.1	22.8	22.0	24.3	18.8		16.1	13.7	10.2	Decreased, 1995-2017	No quadratic change	No change
QNFRCIG: Percentage of students who currently smoked cigarettes frequently (on 20 or more days during the 30 days before the survey)																
		21.3	21.4	17.6	18.3	11.7	10.1	11.0	7.0		5.7	5.7	2.9	Decreased, 1995-2017	No quadratic change	No change
QNDAYCIG: Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)																
		17.1	16.5	13.4	13.9	9.3	7.8	8.9	6.3		4.4	4.4	2.2	Decreased, 1995-2017	No quadratic change	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Male
Tobacco Use

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN34: Percentage of students who ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo])

| | | | | | | | | | | | | 46.7 | 40.4 | No linear change | Not available§ | No change |

QN35: Percentage of students who currently used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo], on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 27.7 | 13.6 | Decreased, 2015-2017 | Not available | Decreased |

QN38: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)

| | | | 27.1 | 23.4 | 17.4 | 19.8 | 19.7 | 16.3 | | 17.0 | 17.1 | 11.4 | Decreased, 1999-2017 | No quadratic change | Decreased |

QNTB2: Percentage of students who currently smoked cigarettes or cigars (on at least 1 day during the 30 days before the survey)

| | | | 42.1 | 36.9 | 28.6 | 29.5 | 29.7 | 25.3 | | 23.6 | 22.8 | 15.9 | Decreased, 1999-2017 | No quadratic change | Decreased |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Alcohol and Other Drug Use

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN41: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)																
		46.8	38.4	39.3	34.3	28.6	28.5	22.9	25.8		22.6	20.5	19.9	Decreased, 1995-2017	Decreased, 1995-2007 Decreased, 2007-2017	No change
QN42: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)																
		57.4	49.8	53.3	49.2	49.7	41.2	44.4	39.5		33.8	34.8	27.5	Decreased, 1995-2017	No quadratic change	Decreased
QN43: Percentage of students who usually got the alcohol they drank by someone giving it to them (during the 30 days before the survey, among students who currently drank alcohol)																
							30.6	36.5			28.8	35.4	36.6	No linear change	Not available[§]	No change
QN48: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)																
		23.3	29.4	28.0	26.8	23.1	19.8	20.4	22.7		23.7	20.0	19.8	Decreased, 1995-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Sexual Behaviors

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN59: Percentage of students who ever had sexual intercourse

| | | 55.7 | 50.4 | 57.4 | 52.2 | 51.5 | 46.3 | 50.9 | 50.2 | | 45.4 | 41.2 | 41.2 | Decreased, 1995-2017 | No quadratic change | No change |

QN60: Percentage of students who had sexual intercourse for the first time before age 13 years

| | | 13.6 | 11.9 | 14.0 | 10.0 | 9.6 | 8.4 | 9.7 | 7.9 | | 5.4 | 5.3 | 3.6 | Decreased, 1995-2017 | No quadratic change | No change |

QN62: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)

| | | 38.5 | 31.9 | 40.2 | 38.7 | 35.3 | 31.5 | 37.2 | 34.9 | | 32.9 | 29.2 | 28.9 | Decreased, 1995-2017 | No quadratic change | No change |

QN63: Percentage of students who drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)

| | | 35.5 | 32.6 | 34.9 | 30.7 | 32.6 | 28.6 | 27.8 | 27.3 | | 23.5 | 22.4 | 17.0 | Decreased, 1995-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Male
Sexual Behaviors

		Health Risk Behavior and Percentages												Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN64: Percentage of students who used a condom during last sexual intercourse (among students who were currently sexually active)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
		60.7	65.8	65.7	66.5	78.8	73.1	65.8	68.7		64.3	59.8	53.0	No linear change	Increased, 1995-2003 Decreased, 2003-2017	No change

QN65: Percentage of students who used birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
		15.6	12.2	14.8	14.2	16.7	11.6	13.9	21.7		14.5	18.8	18.9	No linear change	No quadratic change	No change

QNIUDIMP: Percentage of students who used an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
											1.8	4.1	1.3	No linear change	Not available[§]	No change

QNSHPARG: Percentage of students who used a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active))

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
											1.7	2.5	6.1	Increased, 2013-2017	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Sexual Behaviors

	Health Risk Behavior and Percentages													Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOTHHPL: Percentage of students who used birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

| | | | | | | | | | | | 18.1 | 25.4 | 26.3 | No linear change | Not available§ | No change |

QNDUALBC: Percentage of students who used both a condom during last sexual intercourse and birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

| | | | | | | | | | | | 9.1 | 10.9 | 7.6 | No linear change | Not available | No change |

QNBCNONE: Percentage of students who did not use any method to prevent pregnancy during last sexual intercourse (among students who were currently sexually active)

| | | 12.3 | 13.4 | 9.0 | 11.5 | 4.1 | 10.4 | 11.3 | 8.0 | | 13.5 | 13.0 | 9.8 | No linear change | Decreased, 1995-2003 Increased, 2003-2017 | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Weight Management and Dietary Behaviors

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
				Health Risk Behavior and Percentages												
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOWT: Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				13.2	17.0	14.9	15.9	14.9	14.7		14.7	14.3	15.2	No linear change	No quadratic change	No change

QNOBESE: Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

| | | | | 12.3 | 16.9 | 15.9 | 17.1 | 15.3 | 18.2 | | 18.5 | 15.9 | 18.9 | Increased, 1999-2017 | No quadratic change | No change |

QN70: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)

| | | | | 20.5 | 19.1 | 20.3 | 21.5 | 21.8 | 27.1 | | 27.6 | 28.1 | 30.0 | Increased, 1999-2017 | No quadratic change | No change |

QN71: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

| | | | | 17.0 | 21.4 | 16.0 | 17.0 | 13.0 | 15.5 | | 16.0 | 14.3 | 15.7 | No linear change | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Overweight and obese prevalence estimates for 1999 differ slightly from previously published results because different BMI cut points were used in 1999 than in subsequent years. To make these prevalence estimates comparable, the 1999 prevalence estimates were recalculated using the updated BMI cut points. In addition, beginning in 2017, new, slightly different ranges were used to calculate biologically implausible responses to height and weight questions.

Missouri High School Survey
Trend Analysis Report

Male
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017[†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNFR0: Percentage of students who did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 8.0 | 8.0 | 8.6 | 7.1 | 5.1 | 8.6 | | 8.5 | 7.4 | 8.4 | No linear change | No quadratic change | No change |

QNFR1: Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 59.3 | 58.7 | 59.4 | 57.0 | 57.0 | 54.0 | | 57.2 | 55.1 | 53.9 | Decreased, 1999-2017 | No quadratic change | No change |

QNFR2: Percentage of students who ate fruit or drank 100% fruit juices two or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 28.2 | 30.4 | 28.2 | 27.7 | 31.4 | 26.7 | | 26.7 | 24.8 | 23.4 | Decreased, 1999-2017 | No change, 1999-2007 Decreased, 2007-2017 | No change |

QNFR3: Percentage of students who ate fruit or drank 100% fruit juices three or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 20.7 | 20.9 | 17.9 | 17.9 | 20.8 | 18.2 | | 16.2 | 15.4 | 13.3 | Decreased, 1999-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Male
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages													Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN72: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				39.0	39.3	37.3	38.7	42.3	41.7		45.0	48.5	51.0	Increased, 1999-2017	No quadratic change	No change

QN73: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				26.7	22.7	25.4	28.5	27.1	26.7		25.2	32.6	33.4	Increased, 1999-2017	No quadratic change	No change

QN74: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				57.2	55.9	56.6	52.6	56.7	52.9		51.7	52.8	57.1	No linear change	No quadratic change	No change

QN75: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				16.9	17.4	17.1	16.5	16.8	19.6		21.6	18.9	21.8	Increased, 1999-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Male
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNVEG0: Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				7.6	6.3	5.5	5.6	7.9	8.6		6.1	6.8	9.0	No linear change	No quadratic change	No change

QNVEG1: Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				62.2	61.8	60.5	61.3	57.5	60.7		60.9	60.2	55.8	No linear change	No quadratic change	No change

QNVEG2: Percentage of students who ate vegetables two or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				25.4	29.4	25.0	25.0	25.0	29.6		24.2	23.5	23.5	Decreased, 1999-2017	No quadratic change	No change

QNVEG3: Percentage of students who ate vegetables three or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				12.0	13.9	10.4	12.3	10.8	16.3		10.7	12.1	11.0	No linear change	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Male
Weight Management and Dietary Behaviors

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN77: Percentage of students who did not drink milk (during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				13.8	10.2	12.1	11.8	12.2	14.0		13.8	14.8	20.9	Increased, 1999-2017	No change, 1999-2013 Increased, 2013-2017	Increased

QNMILK1: Percentage of students who drank one or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | 56.4 | 58.1 | 55.1 | 50.1 | 51.7 | 52.1 | | 45.2 | 44.8 | 35.1 | Decreased, 1999-2017 | Decreased, 1999-2013 Decreased, 2013-2017 | Decreased |

QNMILK2: Percentage of students who drank two or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | 44.3 | 45.7 | 41.6 | 38.4 | 36.2 | 37.3 | | 29.8 | 29.0 | 20.3 | Decreased, 1999-2017 | No quadratic change | Decreased |

QNMILK3: Percentage of students who drank three or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | 25.8 | 27.4 | 23.5 | 21.4 | 19.2 | 20.2 | | 16.0 | 13.8 | 8.5 | Decreased, 1999-2017 | Decreased, 1999-2013 Decreased, 2013-2017 | Decreased |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Male
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN78: Percentage of students who did not eat breakfast (during the 7 days before the survey)

											15.5	15.6	17.9	No linear change	Not available[§]	No change

QNBK7DAY: Percentage of students who ate breakfast on all 7 days (during the 7 days before the survey)

											36.9	31.7	30.6	Decreased, 2013-2017	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Physical Activity

	Health Risk Behavior and Percentages													Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN79: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 54.2 | 51.9 | 52.7 | No linear change | Not available[§] | No change |

QNPA0DAY: Percentage of students who did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 14.2 | 13.5 | 15.5 | No linear change | Not available | No change |

QNPA7DAY: Percentage of students who were physically active at least 60 minutes per day on all 7 days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 36.2 | 33.5 | 35.5 | No linear change | Not available | No change |

QN80: Percentage of students who watched television 3 or more hours per day (on an average school day)

| | | | | 43.4 | 43.5 | 35.6 | 38.0 | 30.1 | 35.0 | | 26.8 | 18.1 | 20.0 | Decreased, 1999-2017 | Decreased, 1999-2009 Decreased, 2009-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Physical Activity

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN81: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
								25.2	29.1		33.5	37.1	41.8	Increased, 2007-2017	Not available[§]	No change

QN82: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		54.7	53.6	58.3	62.2	56.6	59.2	60.6	54.8		53.5	55.6	56.4	No linear change	No quadratic change	No change

QNDLYPE: Percentage of students who attended physical education (PE) classes on all 5 days (in an average week when they were in school)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		38.9	31.4	24.9	33.9	37.7	36.6	30.6	40.4		37.0	28.2	32.3	No linear change	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Other

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN86: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)

												65.4	67.5	No linear change	Not available[§]	No change

QNNODNT: Percentage of students who never saw a dentist (for a check-up, exam, teeth cleaning, or other dental work)

												3.8	2.5	No linear change	Not available	No change

QN87: Percentage of students who had ever been told by a doctor or nurse that they had asthma

				17.9	20.6	21.6			21.5	23.5	27.7	Increased, 2005-2017	No quadratic change	No change

QN88: Percentage of students who got 8 or more hours of sleep (on an average school night)

												29.4	20.2	Decreased, 2015-2017	Not available	Decreased

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN90: Percentage of students who rarely or never wore a bicycle helmet (during the 12 months before the survey, among students who had ridden a bicycle)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		95.2	92.9	92.1	90.9	89.1	89.7	84.6	83.8		86.8	88.1	85.3	Decreased, 1995-2017	Decreased, 1995-2009 No change, 2009-2017	No change

QN91: Percentage of students who rarely or never wear a seat belt when driving (among students who drive a car)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											13.3	10.2	12.1	No linear change	Not available[§]	No change

QN92: Percentage of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey, among students who drove a car or other vehicle)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											56.4	47.5	50.3	No linear change	Not available	No change

QN94: Percentage of students who were injured in a physical fight (one or more times during the 12 months before the survey; injuries had to be treated by a doctor or nurse)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		6.3	6.3	5.3	4.3	4.5	4.8	5.4	4.6		11.2	8.7	6.3	Increased, 1995-2017	Decreased, 1995-2003 Increased, 2003-2017	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN97: Percentage of students who tried to quit smoking cigarettes (among students who smoked cigarettes during the 12 months before the survey)

												46.1	46.8	No linear change	Not available[§]	No change

QN100: Percentage of students who ever tried smoking cigars, cigarillos, or little cigars (even one or two puffs)

											30.1	31.1	19.4	Decreased, 2013-2017	Not available	Decreased

QN101: Percentage of students who have ever participated in a program to help them quit using tobacco (among students who have used tobacco)

											14.3	16.4	10.4	No linear change	Not available	No change

QN102: Percentage of students who responded that their school has special groups or classes for students who want to quit using tobacco

											4.8	3.9	5.6	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

	Health Risk Behavior and Percentages			Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN103: Percentage of students who saw or heard ads about the dangers of cigarette smoking (on TV, the Internet or on the radio, on at least 1 day during the 30 days before the survey)																
												76.3	75.3	No linear change	Not available[§]	No change
QN104: Percentage of students who sometimes, most of the time, or always see ads for tobacco products when they use the Internet																
												32.0	38.6	Increased, 2015-2017	Not available	Increased
QN105: Percentage of students who live with someone that smokes cigarettes																
											40.1	39.3	36.3	No linear change	Not available	No change
QN106: Percentage of students who were at home when someone was smoking tobacco products (on at least one day during the 7 days before the survey)																
												32.1	29.4	No linear change	Not available	No change
QN107: Percentage of students who rode in a vehicle where someone was smoking tobacco products (on at least one day during the 7 days before the survey)																
												32.0	33.6	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN108: Percentage of students who breathed the smoke from someone who was smoking tobacco products in indoor or outdoor public places (such as school buildings, stores, restaurants, stadiums, school grounds, parking lots, and parks, on at least one day during the 7 days before the survey)

| | | | | | | | | | | | | 45.4 | 43.2 | No linear change | Not available[§] | No change |

QN109: Percentage of students who breathed the smoke from someone who was smoking tobacco products in the place where they worked (on at least one day during the 7 days before the survey, among students who worked during the 7 days before the survey)

| | | | | | | | | | | | | 27.0 | 29.1 | No linear change | Not available | No change |

QN110: Percentage of students who participated in any community activities to educate the public about the dangers of secondhand smoke (during the 12 months before the survey)

| | | | | | | | | | | | | 8.5 | 7.9 | 7.5 | No linear change | Not available | No change |

QN111: Percentage of students who live in a home where smoking tobacco products is never allowed

| | | | | | | | | | | | | 72.5 | 73.0 | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN112: Percentage of students who ride in or drive family vehicles in which smoking tobacco products is never allowed

												67.0	68.1	No linear change	Not available[§]	No change

QN113: Percentage of students who think people should never allow smoking inside their home

												75.0	76.4	No linear change	Not available	No change

QN114: Percentage of students who think people should never allow smoking in their vehicles

												71.6	73.8	No linear change	Not available	No change

QN115: Percentage of students who think employers should never allow smoking in indoor areas in places where people work

												82.1	85.6	No linear change	Not available	Increased

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

51

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN117: Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)

| | | | | | | | | | | | 57.7 | 59.3 | 55.0 | No linear change | Not available§ | No change |

QN118: Percentage of students who had been told by a doctor or nurse that they had asthma and who still have asthma

| | | | | 9.9 | 10.4 | | | 7.9 | 9.9 | 11.2 | No linear change | Not available | No change |

QN119: Percentage of students who have ever been taught by a nurse or doctor how to take care of or manage their asthma (among students who have ever had asthma)

| | | | | | | | | | | | 47.3 | 49.9 | 48.3 | No linear change | Not available | No change |

QN120: Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not counting getting a spray-on tan], one or more times during the 12 months before the survey)

| | | | | | | | | | | | | 8.2 | 8.1 | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Male
Site-Added

	Health Risk Behavior and Percentages		Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN122: Percentage of students who ate dinner at home with at least one of their parents on four or more days (during the 7 days before the survey)

												60.6	58.9	No linear change	Not available[§]	No change

QN123: Percentage of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement

												56.0	65.3	Increased, 2015-2017	Not available	Increased

QN124: Percentage of students who most of the time or always get the kind of help they need (among students who report having felt sad, empty, hopeless, angry, or anxious)

												22.8	20.9	No linear change	Not available	No change

QN125: Percentage of students who participate in school activities one or more hours (such as sports, band, drama, or clubs, during an average week when they are in school)

												64.4	64.1	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Injury and Violence

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN8: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		22.4	23.0	18.0	13.5	13.1	8.0	9.8	8.6		9.0	4.4	5.9	Decreased, 1995-2017	Decreased, 1995-2005 Decreased, 2005-2017	No change

QN9: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)

| | | 43.3 | 40.3 | 33.1 | 30.3 | 33.0 | 25.2 | 29.7 | 23.4 | | 19.4 | 16.8 | 14.7 | Decreased, 1995-2017 | No quadratic change | No change |

QN10: Percentage of students who drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)

| | | | | | | | | | | | 6.7 | 5.8 | 3.6 | No linear change | Not available[§] | No change |

QN11: Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)

| | | | | | | | | | | | 44.9 | 47.5 | 47.7 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Injury and Violence

						Health Risk Behavior and Percentages								Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN12: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

| | | 8.2 | 7.1 | 9.1 | 6.6 | 5.2 | 7.5 | 7.5 | 5.9 | | 10.6 | 10.8 | 11.5 | Increased, 1995-2017 | No change, 1995-2009 Increased, 2009-2017 | No change |

QN13: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 2.9 | 2.6 | No linear change | Not available[§] | No change |

QN15: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 4.1 | 4.7 | No linear change | Not available | No change |

QN19: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)

| | | | | | 10.2 | 13.0 | 10.8 | 14.0 | 12.0 | | 15.4 | 11.9 | 13.3 | No linear change | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Injury and Violence

	Health Risk Behavior and Percentages			Linear Change*	Quadratic Change*	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN22: Percentage of students who experienced physical dating violence (being physically hurt on purpose by someone they were dating or going out with [counting such things as being hit, slammed into something, or injured with an object or weapon] one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)

											11.6	10.2	11.4	No linear change	Not available[§]	No change

QN23: Percentage of students who were bullied on school property (ever during the 12 months before the survey)

									24.5		30.4	22.9	27.0	No linear change	Not available	No change

QN24: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)

												21.4	23.8	No linear change	Not available	No change

QN25: Percentage of students who felt sad or hopeless (almost every day for >=2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)

				29.8	33.3	32.1	31.6	29.5	33.2		38.4	31.3	38.3	Increased, 1999-2017	No quadratic change	Increased

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Injury and Violence

						Health Risk Behavior and Percentages								Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN26: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)																
		29.4	27.1	19.3	23.0	21.5	19.9	19.4	20.6		18.6	18.9	24.1	Decreased, 1995-2017	Decreased, 1995-1999 No change, 1999-2017	Increased
QN27: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)																
		22.4	19.0	14.0	18.4	15.9	14.0	12.9	14.2		16.4	15.8	16.6	Decreased, 1995-2017	Decreased, 1995-2007 No change, 2007-2017	No change
QN28: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)																
		10.9	11.1	6.8	11.0	9.8	9.3	10.7	7.9		8.0	10.3	8.4	No linear change	No quadratic change	No change
QN29: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)																
		3.5	3.5	3.1	2.3	2.7	2.3	2.9	3.3		2.8	3.2	2.6	No linear change	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Female
Tobacco Use

								Health Risk Behavior and Percentages							Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN30: Percentage of students who ever tried cigarette smoking (even one or two puffs)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		74.6	73.7	66.3	68.7	64.7	49.3	51.3	46.0		36.0	31.3	30.0	Decreased, 1995-2017	No quadratic change	No change

QN32: Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)

| | | 39.4 | 40.8 | 30.1 | 30.4 | 26.9 | 20.5 | 23.2 | 19.1 | | 13.2 | 8.1 | 8.1 | Decreased, 1995-2017 | Decreased, 1995-2009 Decreased, 2009-2017 | No change |

QNFRCIG: Percentage of students who currently smoked cigarettes frequently (on 20 or more days during the 30 days before the survey)

| | | 20.5 | 23.1 | 15.0 | 17.7 | 15.3 | 11.4 | 11.8 | 6.6 | | 5.4 | 2.8 | 2.4 | Decreased, 1995-2017 | Decreased, 1995-2007 Decreased, 2007-2017 | No change |

QNDAYCIG: Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)

| | | 15.7 | 17.8 | 10.8 | 13.0 | 12.3 | 8.5 | 8.7 | 4.8 | | 3.4 | 1.8 | 1.8 | Decreased, 1995-2017 | No change, 1995-2003 Decreased, 2003-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Female
Tobacco Use

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN34: Percentage of students who ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo])

| | | | | | | | | | | | | 35.0 | 39.5 | No linear change | Not available[§] | No change |

QN35: Percentage of students who currently used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo], on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 16.5 | 7.9 | Decreased, 2015-2017 | Not available | Decreased |

QN38: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)

| | | | 11.6 | 9.2 | 9.2 | 9.4 | 10.0 | 10.5 | | 9.3 | 7.1 | 6.8 | Decreased, 1999-2017 | No quadratic change | No change |

QNTB2: Percentage of students who currently smoked cigarettes or cigars (on at least 1 day during the 30 days before the survey)

| | | | 33.7 | 32.1 | 28.3 | 23.8 | 26.1 | 23.0 | | 17.7 | 12.2 | 10.4 | Decreased, 1999-2017 | Decreased, 1999-2013 Decreased, 2013-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Alcohol and Other Drug Use

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN41: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)

| | | 32.7 | 28.4 | 27.4 | 25.5 | 21.7 | 19.8 | 18.6 | 14.7 | | 16.2 | 14.2 | 16.9 | Decreased, 1995-2017 | Decreased, 1995-2009 No change, 2009-2017 | No change |

QN42: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)

| | | 53.9 | 53.0 | 46.5 | 46.1 | 48.5 | 40.4 | 44.1 | 39.1 | | 37.4 | 34.3 | 36.1 | Decreased, 1995-2017 | No quadratic change | No change |

QN43: Percentage of students who usually got the alcohol they drank by someone giving it to them (during the 30 days before the survey, among students who currently drank alcohol)

| | | | | | | | 44.9 | 45.9 | | | 39.2 | 44.2 | 47.6 | No linear change | Not available[§] | No change |

QN48: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)

| | | 20.2 | 26.9 | 23.3 | 21.9 | 20.4 | 16.2 | 17.4 | 18.4 | | 17.0 | 12.6 | 19.5 | Decreased, 1995-2017 | No quadratic change | Increased |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Sexual Behaviors

					Health Risk Behavior and Percentages									**Linear Change**[*]	**Quadratic Change**[*]	**Change from 2015-2017** [†]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN59: Percentage of students who ever had sexual intercourse

| | | 51.6 | 52.4 | 56.1 | 49.6 | 52.8 | 47.1 | 53.1 | 47.3 | | 40.7 | 35.1 | 42.4 | Decreased, 1995-2017 | No quadratic change | No change |

QN60: Percentage of students who had sexual intercourse for the first time before age 13 years

| | | 4.3 | 4.5 | 5.0 | 3.0 | 4.2 | 3.5 | 3.2 | 3.4 | | 2.4 | 2.9 | 1.2 | Decreased, 1995-2017 | No quadratic change | No change |

QN62: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)

| | | 39.9 | 41.2 | 42.9 | 38.9 | 41.6 | 34.7 | 43.7 | 36.3 | | 31.9 | 26.1 | 35.6 | Decreased, 1995-2017 | No quadratic change | Increased |

QN63: Percentage of students who drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)

| | | 22.9 | 21.5 | 16.8 | 20.0 | 22.3 | 18.1 | 16.8 | 19.4 | | 17.9 | 18.0 | 14.3 | Decreased, 1995-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Female
Sexual Behaviors

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN64: Percentage of students who used a condom during last sexual intercourse (among students who were currently sexually active)

| | | 43.8 | 52.9 | 54.4 | 56.4 | 56.9 | 61.5 | 53.8 | 51.1 | | 51.8 | 53.5 | 49.5 | No linear change | Increased, 1995-2001 No change, 2001-2017 | No change |

QN65: Percentage of students who used birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

| | | 25.9 | 26.8 | 26.2 | 27.9 | 30.5 | 23.7 | 23.2 | 27.0 | | 17.6 | 27.1 | 27.4 | No linear change | No quadratic change | No change |

QNIUDIMP: Percentage of students who used an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

| | | | | | | | | | | | 5.2 | 4.9 | 5.9 | No linear change | Not available[§] | No change |

QNSHPARG: Percentage of students who used a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active))

| | | | | | | | | | | | 7.9 | 8.7 | 7.2 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Sexual Behaviors

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOTHHPL: Percentage of students who used birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

| | | | | | | | | | | | 30.8 | 40.7 | 40.5 | No linear change | Not available[§] | No change |

QNDUALBC: Percentage of students who used both a condom during last sexual intercourse and birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

| | | | | | | | | | | | 10.0 | 14.7 | 15.4 | No linear change | Not available | No change |

QNBCNONE: Percentage of students who did not use any method to prevent pregnancy during last sexual intercourse (among students who were currently sexually active)

| | | 15.1 | 14.3 | 13.2 | 10.9 | 7.4 | 9.6 | 10.4 | 8.7 | | 18.9 | 10.5 | 14.9 | No linear change | Decreased, 1995-2003 Increased, 2003-2017 | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

63

Missouri High School Survey
Trend Analysis Report

Female
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages													Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOWT: Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

| | | | | 13.7 | 12.3 | 15.0 | 15.7 | 13.4 | 13.8 | | 16.3 | 12.4 | 16.2 | No linear change | No quadratic change | No change |

QNOBESE: Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

| | | | | 5.3 | 8.3 | 8.2 | 10.6 | 8.5 | 10.4 | | 11.1 | 10.3 | 14.4 | Increased, 1999-2017 | No quadratic change | No change |

QN70: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)

| | | | | 19.1 | 20.8 | 22.4 | 21.0 | 22.6 | 25.0 | | 31.3 | 34.3 | 38.8 | Increased, 1999-2017 | No change, 1999-2007 Increased, 2007-2017 | No change |

QN71: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

| | | | | 16.1 | 17.9 | 15.5 | 11.9 | 13.3 | 11.0 | | 12.2 | 11.3 | 11.8 | Decreased, 1999-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Overweight and obese prevalence estimates for 1999 differ slightly from previously published results because different BMI cut points were used in 1999 than in subsequent years. To make these prevalence estimates comparable, the 1999 prevalence estimates were recalculated using the updated BMI cut points. In addition, beginning in 2017, new, slightly different ranges were used to calculate biologically implausible responses to height and weight questions.

Missouri High School Survey
Trend Analysis Report

Female
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNFR0: Percentage of students who did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				4.9	6.3	5.2	5.0	5.8	5.5		6.8	5.7	7.4	No linear change	No quadratic change	No change

QNFR1: Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				57.4	54.6	49.0	57.6	56.6	57.9		52.4	52.1	47.0	Decreased, 1999-2017	No change, 1999-2009 Decreased, 2009-2017	No change

QNFR2: Percentage of students who ate fruit or drank 100% fruit juices two or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				28.6	26.6	21.2	23.6	26.8	29.0		22.7	23.4	22.6	No linear change	No quadratic change	No change

QNFR3: Percentage of students who ate fruit or drank 100% fruit juices three or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change 2015-2017
				18.8	17.1	13.3	14.2	15.4	17.2		13.2	12.2	11.1	Decreased, 1999-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Female
Weight Management and Dietary Behaviors

							Health Risk Behavior and Percentages								Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN72: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009		2013	2015	2017	Linear	Quadratic	Change
				30.1	29.3	27.9	29.9	27.9	32.3		37.6	38.8	40.6	Increased, 1999-2017	No change, 1999-2007 Increased, 2007-2017	No change

QN73: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)

| | | | | 26.5 | 27.5 | 28.0 | 25.3 | 31.1 | 31.4 | | 30.6 | 36.4 | 34.3 | Increased, 1999-2017 | No quadratic change | No change |

QN74: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)

| | | | | 57.9 | 55.8 | 55.5 | 54.7 | 56.9 | 53.2 | | 57.4 | 57.2 | 59.7 | No linear change | No quadratic change | No change |

QN75: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)

| | | | | 14.6 | 12.8 | 9.6 | 12.0 | 14.6 | 13.7 | | 21.7 | 16.1 | 17.3 | Increased, 1999-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Female
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages															Linear Change[*]	Quadratic Change[*]	Change from 2015-2017[†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QNVEG0: Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

				4.2	2.6	2.5	3.6	5.3	4.7		6.3	5.5	7.7	Increased, 1999-2017	No quadratic change	No change

QNVEG1: Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

				61.2	64.8	64.0	63.6	61.6	64.2		56.3	56.1	54.9	Decreased, 1999-2017	No quadratic change	No change

QNVEG2: Percentage of students who ate vegetables two or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

				27.5	25.3	21.7	23.5	24.5	27.2		24.2	20.2	20.1	Decreased, 1999-2017	No quadratic change	No change

QNVEG3: Percentage of students who ate vegetables three or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

				12.2	11.1	8.2	9.4	11.5	12.2		12.4	8.9	7.9	No linear change	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Female
Weight Management and Dietary Behaviors

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN77: Percentage of students who did not drink milk (during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				25.4	20.5	21.6	18.2	24.6	19.5		22.8	26.3	30.8	Increased, 1999-2017	No change, 1999-2013 / Increased, 2013-2017	No change

QNMILK1: Percentage of students who drank one or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				33.0	37.5	36.3	40.7	34.9	36.7		30.5	28.1	22.5	Decreased, 1999-2017	No change, 1999-2009 / Decreased, 2009-2017	No change

QNMILK2: Percentage of students who drank two or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				20.5	25.7	19.4	22.5	20.7	22.1		17.7	15.8	12.0	Decreased, 1999-2017	No change, 1999-2009 / Decreased, 2009-2017	No change

QNMILK3: Percentage of students who drank three or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				9.5	12.9	7.8	10.1	9.1	11.3		6.6	7.1	4.9	Decreased, 1999-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Female
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN78: Percentage of students who did not eat breakfast (during the 7 days before the survey)

| | | | | | | | | | | | 12.9 | 15.5 | 11.3 | No linear change | Not available[§] | Decreased |

QNBK7DAY: Percentage of students who ate breakfast on all 7 days (during the 7 days before the survey)

| | | | | | | | | | | | 34.5 | 30.5 | 34.2 | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Physical Activity

	Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN79: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 36.3 | 40.1 | 39.7 | No linear change | Not available[§] | No change |

QNPA0DAY: Percentage of students who did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 20.3 | 18.8 | 17.8 | No linear change | Not available | No change |

QNPA7DAY: Percentage of students who were physically active at least 60 minutes per day on all 7 days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 18.0 | 19.0 | 21.8 | No linear change | Not available | No change |

QN80: Percentage of students who watched television 3 or more hours per day (on an average school day)

| | | | 36.8 | 32.2 | 29.0 | 29.7 | 29.1 | 29.8 | | 24.5 | 23.9 | 22.0 | Decreased, 1999-2017 | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Physical Activity

					Health Risk Behavior and Percentages									Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN81: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)

| | | | | | | | | 18.0 | 16.5 | | 31.9 | 38.3 | 42.9 | Increased, 2007-2017 | Not available[§] | No change |

QN82: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school)

| | | 38.4 | 38.6 | 42.3 | 49.3 | 42.4 | 39.8 | 41.5 | 33.4 | | 38.3 | 36.9 | 42.6 | No linear change | No quadratic change | No change |

QNDLYPE: Percentage of students who attended physical education (PE) classes on all 5 days (in an average week when they were in school)

| | | 28.6 | 25.9 | 15.2 | 26.1 | 28.7 | 25.6 | 17.4 | 25.4 | | 24.4 | 18.2 | 24.9 | No linear change | No quadratic change | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Other

							Health Risk Behavior and Percentages							Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN86: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)

												2015	2017	Linear Change	Quadratic Change	Change 2015-2017
												73.2	72.4	No linear change	Not available§	No change

QNNODNT: Percentage of students who never saw a dentist (for a check-up, exam, teeth cleaning, or other dental work)

| | | | | | | | | | | | | 1.8 | 2.0 | No linear change | Not available | No change |

QN87: Percentage of students who had ever been told by a doctor or nurse that they had asthma

			2005	2007	2009		2013	2015	2017	Linear Change	Quadratic Change	Change
			21.5	20.9	19.7		26.5	20.6	25.9	No linear change	No quadratic change	No change

QN88: Percentage of students who got 8 or more hours of sleep (on an average school night)

| | | | | | | | | | | | | 25.5 | 20.4 | Decreased, 2015-2017 | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

					Health Risk Behavior and Percentages									**Linear Change**[*]	**Quadratic Change**[*]	**Change from 2015-2017** [†]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			
QN90: Percentage of students who rarely or never wore a bicycle helmet (during the 12 months before the survey, among students who had ridden a bicycle)																
		96.8	92.1	90.7	88.5	84.9	87.3	85.4	77.4		86.4	82.9	80.9	Decreased, 1995-2017	Decreased, 1995-1999 Decreased, 1999-2017	No change
QN91: Percentage of students who rarely or never wear a seat belt when driving (among students who drive a car)																
											7.7	3.5	4.9	No linear change	Not available[§]	No change
QN92: Percentage of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey, among students who drove a car or other vehicle)																
											51.2	49.5	55.3	No linear change	Not available	No change
QN94: Percentage of students who were injured in a physical fight (one or more times during the 12 months before the survey; injuries had to be treated by a doctor or nurse)																
		2.5	2.5	2.5	2.5	2.7	3.0	4.5	3.0		6.9	3.8	2.8	Increased, 1995-2017	No quadratic change	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

														Health Risk Behavior and Percentages	Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN100: Percentage of students who ever tried smoking cigars, cigarillos, or little cigars (even one or two puffs)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
16.9	18.5	13.2	No linear change	Not available[§]	Decreased

QN101: Percentage of students who have ever participated in a program to help them quit using tobacco (among students who have used tobacco)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
6.5	10.7	7.6	No linear change	Not available	No change

QN102: Percentage of students who responded that their school has special groups or classes for students who want to quit using tobacco

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
2.7	1.3	2.4	No linear change	Not available	No change

QN103: Percentage of students who saw or heard ads about the dangers of cigarette smoking (on TV, the Internet or on the radio, on at least 1 day during the 30 days before the survey)

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
81.3	80.4	No linear change	Not available	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN104: Percentage of students who sometimes, most of the time, or always see ads for tobacco products when they use the Internet

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												34.0	42.2	Increased, 2015-2017	Not available[§]	Increased

QN105: Percentage of students who live with someone that smokes cigarettes

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											42.6	33.7	39.9	No linear change	Not available	No change

QN106: Percentage of students who were at home when someone was smoking tobacco products (on at least one day during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												24.9	31.9	No linear change	Not available	No change

QN107: Percentage of students who rode in a vehicle where someone was smoking tobacco products (on at least one day during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												32.3	39.1	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

	Health Risk Behavior and Percentages	Linear Change*	Quadratic Change*	Change from 2015-2017 †

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017

QN108: Percentage of students who breathed the smoke from someone who was smoking tobacco products in indoor or outdoor public places (such as school buildings, stores, restaurants, stadiums, school grounds, parking lots, and parks, on at least one day during the 7 days before the survey)

												51.5	58.0	No linear change	Not available§	Increased

QN109: Percentage of students who breathed the smoke from someone who was smoking tobacco products in the place where they worked (on at least one day during the 7 days before the survey, among students who worked during the 7 days before the survey)

												15.2	24.5	Increased, 2015-2017	Not available	Increased

QN110: Percentage of students who participated in any community activities to educate the public about the dangers of secondhand smoke (during the 12 months before the survey)

											8.7	4.7	5.3	No linear change	Not available	No change

QN111: Percentage of students who live in a home where smoking tobacco products is never allowed

												78.0	73.6	No linear change	Not available	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN112: Percentage of students who ride in or drive family vehicles in which smoking tobacco products is never allowed

| | | | | | | | | | | | | 71.3 | 65.1 | No linear change | Not available[§] | No change |

QN113: Percentage of students who think people should never allow smoking inside their home

| | | | | | | | | | | | | 85.4 | 85.0 | No linear change | Not available | No change |

QN114: Percentage of students who think people should never allow smoking in their vehicles

| | | | | | | | | | | | | 81.0 | 79.0 | No linear change | Not available | No change |

QN115: Percentage of students who think employers should never allow smoking in indoor areas in places where people work

| | | | | | | | | | | | | 89.8 | 90.1 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN117: Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)

| | | | | | | | | | | | 43.2 | 43.8 | 40.0 | No linear change | Not available[§] | No change |

QN118: Percentage of students who had been told by a doctor or nurse that they had asthma and who still have asthma

| | | | | | 13.2 | 12.9 | | | 16.3 | 12.3 | 15.2 | | | No linear change | Not available | No change |

QN119: Percentage of students who have ever been taught by a nurse or doctor how to take care of or manage their asthma (among students who have ever had asthma)

| | | | | | | | | | 60.9 | 56.1 | 66.5 | | | No linear change | Not available | No change |

QN120: Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not counting getting a spray-on tan], one or more times during the 12 months before the survey)

| | | | | | | | | | | 17.8 | 17.5 | | | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Female
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN122: Percentage of students who ate dinner at home with at least one of their parents on four or more days (during the 7 days before the survey)

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
63.2	58.0	Decreased, 2015-2017	Not available[§]	No change

QN123: Percentage of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement

| 62.7 | 58.7 | No linear change | Not available | No change |

QN124: Percentage of students who most of the time or always get the kind of help they need (among students who report having felt sad, empty, hopeless, angry, or anxious)

| 28.0 | 30.1 | No linear change | Not available | No change |

QN125: Percentage of students who participate in school activities one or more hours (such as sports, band, drama, or clubs, during an average week when they are in school)

| 71.0 | 66.8 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Injury and Violence

							Health Risk Behavior and Percentages							Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN8: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)

| | | 30.3 | 26.6 | 19.3 | 18.5 | 13.3 | 11.9 | 10.2 | 9.4 | | 9.8 | 7.2 | 7.8 | Decreased, 1995-2017 | Decreased, 1995-2007 No change, 2007-2017 | No change |

QN9: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)

| | | 45.4 | 41.7 | 37.0 | 33.4 | 30.8 | 24.5 | 27.1 | 24.5 | | 17.4 | 17.5 | 14.3 | Decreased, 1995-2017 | No quadratic change | No change |

QN10: Percentage of students who drove a car or other vehicle when they had been drinking alcohol (one or more times during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)

| | | | | | | | | | | | 8.8 | 6.5 | 5.3 | Decreased, 2013-2017 | Not available[¶] | No change |

QN11: Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)

| | | | | | | | | | | | 47.3 | 49.8 | 46.6 | No linear change | Not available | No change |

---

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Injury and Violence

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017[§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN12: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)																
		24.9	19.9	19.0	20.2	16.3	18.9	17.6	14.9		23.6	23.4	21.8	No linear change	Decreased, 1995-2003 Increased, 2003-2017	No change
QN13: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)																
												5.8	4.3	No linear change	Not available[¶]	No change
QN15: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)																
												4.6	4.6	No linear change	Not available	No change
QN19: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)																
					6.7	8.6	6.4	10.0	7.3		8.5	7.5	9.8	No linear change	No quadratic change	No change

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Injury and Violence

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN22: Percentage of students who experienced physical dating violence (being physically hurt on purpose by someone they were dating or going out with [counting such things as being hit, slammed into something, or injured with an object or weapon] one or more times during the 12 months before the survey, among students who dated or went out with someone during the 12 months before the survey)

									7.8	10.0	9.9	No linear change	Not available[¶]	No change

QN23: Percentage of students who were bullied on school property (ever during the 12 months before the survey)

								23.9		26.0	22.1	23.6	No linear change	Not available	No change

QN24: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)

										17.3	19.9	No linear change	Not available	No change

QN25: Percentage of students who felt sad or hopeless (almost every day for >=2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)

23.4	28.1	25.2	24.8	23.0	25.6		25.6	26.4	31.7	Increased, 1999-2017	No change, 1999-2013 Increased, 2013-2017	Increased

---

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Injury and Violence

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN26: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)

| | | 24.2 | 22.6 | 16.9 | 19.2 | 16.5 | 15.9 | 14.9 | 14.2 | | 14.2 | 16.9 | 20.4 | Decreased, 1995-2017 | Decreased, 1995-2009 Increased, 2009-2017 | No change |

QN27: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)

| | | 18.9 | 16.5 | 13.5 | 13.9 | 13.1 | 11.3 | 10.0 | 10.3 | | 12.2 | 13.0 | 16.1 | Decreased, 1995-2017 | Decreased, 1995-2009 Increased, 2009-2017 | No change |

QN28: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)

| | | 8.1 | 8.5 | 5.6 | 8.0 | 6.3 | 6.7 | 7.4 | 5.3 | | 6.0 | 8.9 | 7.8 | No linear change | Decreased, 1995-2009 Increased, 2009-2017 | No change |

QN29: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)

| | | 2.6 | 2.4 | 2.3 | 1.6 | 1.8 | 1.3 | 1.9 | 1.9 | | 1.8 | 2.9 | 2.2 | No linear change | No change, 1995-2003 No change, 2003-2017 | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

White*
Tobacco Use

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN30: Percentage of students who ever tried cigarette smoking (even one or two puffs)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017[§]
		74.6	73.8	70.6	69.6	62.7	50.5	49.3	45.5		38.1	33.9	30.6	Decreased, 1995-2017	No quadratic change	No change

QN32: Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)

| | | 40.8 | 43.4 | 39.4 | 32.6 | 26.0 | 23.3 | 25.2 | 19.4 | | 14.4 | 12.0 | 9.9 | Decreased, 1995-2017 | No quadratic change | No change |

QNFRCIG: Percentage of students who currently smoked cigarettes frequently (on 20 or more days during the 30 days before the survey)

| | | 21.4 | 24.7 | 20.0 | 19.6 | 14.3 | 12.2 | 12.1 | 6.7 | | 5.4 | 4.6 | 2.9 | Decreased, 1995-2017 | No change, 1995-2001 Decreased, 2001-2017 | No change |

QNDAYCIG: Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)

| | | 16.7 | 19.2 | 14.7 | 14.6 | 11.5 | 9.3 | 9.9 | 5.6 | | 3.9 | 3.5 | 2.1 | Decreased, 1995-2017 | Decreased, 1995-2007 Decreased, 2007-2017 | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

White*
Tobacco Use

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN34: Percentage of students who ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo])

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												41.7	40.8	No linear change	Not available[¶]	No change

QN35: Percentage of students who currently used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo], on at least 1 day during the 30 days before the survey)

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												22.2	11.5	Decreased, 2015-2017	Not available	Decreased

QN38: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
21.4	16.4	12.5	13.9	14.2	12.1		11.7	12.2	9.4	Decreased, 1999-2017	No quadratic change	No change

QNTB2: Percentage of students who currently smoked cigarettes or cigars (on at least 1 day during the 30 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
43.8	36.5	29.1	27.5	28.5	23.6		19.9	18.1	13.6	Decreased, 1999-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Alcohol and Other Drug Use

					Health Risk Behavior and Percentages									Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN41: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)																
		39.3	33.6	31.7	29.4	23.3	22.5	20.0	17.9		18.9	15.3	18.4	Decreased, 1995-2017	Decreased, 1995-2009 No change, 2009-2017	No change
QN42: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)																
		56.6	55.2	55.7	49.9	50.3	42.5	47.0	40.0		36.1	37.0	34.0	Decreased, 1995-2017	No quadratic change	No change
QN43: Percentage of students who usually got the alcohol they drank by someone giving it to them (during the 30 days before the survey, among students who currently drank alcohol)																
							37.9	41.4			34.7	39.8	43.1	No linear change	Not available[¶]	No change
QN48: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)																
		20.6	26.1	22.3	24.2	20.0	17.4	17.5	18.4		17.9	14.7	19.2	Decreased, 1995-2017	No quadratic change	Increased

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Sexual Behaviors

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN59: Percentage of students who ever had sexual intercourse

| | | 51.8 | 46.0 | 51.0 | 47.9 | 50.4 | 43.3 | 48.8 | 43.9 | | 39.4 | 37.1 | 41.9 | Decreased, 1995-2017 | No quadratic change | No change |

QN60: Percentage of students who had sexual intercourse for the first time before age 13 years

| | | 7.0 | 4.6 | 5.5 | 4.8 | 4.0 | 4.3 | 4.0 | 2.9 | | 2.2 | 2.9 | 1.9 | Decreased, 1995-2017 | No quadratic change | No change |

QN62: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)

| | | 37.3 | 33.1 | 38.0 | 37.0 | 36.8 | 31.3 | 38.2 | 32.4 | | 30.5 | 27.6 | 33.0 | Decreased, 1995-2017 | No quadratic change | No change |

QN63: Percentage of students who drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)

| | | 29.1 | 28.5 | 30.3 | 25.5 | 26.3 | 23.8 | 23.1 | 23.7 | | 18.3 | 20.7 | 15.6 | Decreased, 1995-2017 | No quadratic change | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

White*
Sexual Behaviors

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN64: Percentage of students who used a condom during last sexual intercourse (among students who were currently sexually active)																
		51.6	55.2	52.5	59.7	63.5	63.7	57.5	57.5		56.4	56.3	51.6	No linear change	Increased, 1995-2003 Decreased, 2003-2017	No change
QN65: Percentage of students who used birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)																
		21.8	23.4	28.5	24.4	26.7	19.8	22.5	30.0		17.9	24.4	26.4	No linear change	No quadratic change	No change
QNIUDIMP: Percentage of students who used an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)																
											2.3	4.6	4.0	No linear change	Not available[¶]	No change
QNSHPARG: Percentage of students who used a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active))																
											5.5	5.7	7.0	No linear change	Not available	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Sexual Behaviors

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017

QNOTHHPL: Percentage of students who used birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

											25.8	34.7	37.4	Increased, 2013-2017	Not available[¶]	No change

QNDUALBC: Percentage of students who used both a condom during last sexual intercourse and birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)

											9.2	13.0	14.3	Increased, 2013-2017	Not available	No change

QNBCNONE: Percentage of students who did not use any method to prevent pregnancy during last sexual intercourse (among students who were currently sexually active)

12.7	12.4	11.4	10.5	6.4	9.3	9.0	6.5		13.7	9.3	10.8	No linear change	Decreased, 1995-2009 No change, 2009-2017	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

89

Missouri High School Survey
Trend Analysis Report

White*
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages															Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QNOWT: Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[¶]

| | | | | 10.8 | 14.1 | 14.1 | 15.9 | 13.0 | 12.4 | | 15.0 | 12.2 | 15.5 | No linear change | No quadratic change | No change |

QNOBESE: Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[¶]

| | | | | 8.2 | 11.5 | 12.6 | 12.4 | 10.0 | 14.1 | | 14.5 | 12.2 | 15.6 | Increased, 1999-2017 | No quadratic change | No change |

QN70: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)

| | | | | 20.3 | 20.8 | 20.9 | 22.2 | 23.3 | 26.8 | | 29.8 | 33.1 | 35.6 | Increased, 1999-2017 | No quadratic change | No change |

QN71: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

| | | | | 14.1 | 18.7 | 14.6 | 12.4 | 11.3 | 11.5 | | 14.1 | 12.5 | 12.3 | Decreased, 1999-2017 | Decreased, 1999-2007 No change, 2007-2017 | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Overweight and obese prevalence estimates for 1999 differ slightly from previously published results because different BMI cut points were used in 1999 than in subsequent years. To make these prevalence estimates comparable, the 1999 prevalence estimates were recalculated using the updated BMI cut points. In addition, beginning in 2017, new, slightly different ranges were used to calculate biologically implausible responses to height and weight questions.

Missouri High School Survey
Trend Analysis Report

White*
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNFR0: Percentage of students who did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 5.7 | 7.3 | 6.4 | 5.7 | 5.0 | 6.3 | | 7.4 | 6.6 | 7.2 | No linear change | No quadratic change | No change |

QNFR1: Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 57.7 | 55.2 | 53.5 | 57.4 | 56.0 | 55.1 | | 54.2 | 52.4 | 49.2 | Decreased, 1999-2017 | No quadratic change | No change |

QNFR2: Percentage of students who ate fruit or drank 100% fruit juices two or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 25.7 | 26.6 | 22.5 | 25.5 | 27.7 | 25.5 | | 23.1 | 22.8 | 22.1 | Decreased, 1999-2017 | No quadratic change | No change |

QNFR3: Percentage of students who ate fruit or drank 100% fruit juices three or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 17.3 | 16.8 | 13.4 | 14.7 | 16.0 | 15.2 | | 12.5 | 12.1 | 10.9 | Decreased, 1999-2017 | No quadratic change | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

White*
Weight Management and Dietary Behaviors

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN72: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
				29.3	32.3	30.9	31.3	32.5	33.9		40.0	40.7	44.2	Increased, 1999-2017	No change, 1999-2007 Increased, 2007-2017	No change

QN73: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)

				21.8	23.8	24.2	24.1	26.1	26.6		26.3	33.2	30.5	Increased, 1999-2017	No quadratic change	No change

QN74: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)

				50.0	53.3	54.0	49.6	53.2	50.0		51.9	52.0	56.6	No linear change	No quadratic change	No change

QN75: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)

				11.7	14.1	12.6	12.6	13.5	13.9		19.5	14.1	18.0	Increased, 1999-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

White*
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages															Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNVEG0: Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | 3.2 | 4.1 | 3.5 | 3.2 | 4.8 | 5.0 | | 5.1 | 4.5 | 7.3 | Increased, 1999-2017 | No quadratic change | No change |

QNVEG1: Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | 68.5 | 65.0 | 63.4 | 65.2 | 62.7 | 65.6 | | 60.7 | 60.7 | 57.4 | Decreased, 1999-2017 | No quadratic change | No change |

QNVEG2: Percentage of students who ate vegetables two or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | 29.3 | 28.2 | 24.0 | 25.2 | 24.7 | 29.7 | | 24.2 | 21.3 | 21.9 | Decreased, 1999-2017 | No quadratic change | No change |

QNVEG3: Percentage of students who ate vegetables three or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | 12.3 | 12.0 | 9.2 | 10.8 | 10.3 | 13.4 | | 10.1 | 9.7 | 8.5 | Decreased, 1999-2017 | No quadratic change | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

White*
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages			Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN77: Percentage of students who did not drink milk (during the 7 days before the survey)																
				15.0	13.1	14.8	13.2	15.2	12.9		15.6	17.9	22.3	Increased, 1999-2017	No change, 1999-2013 Increased, 2013-2017	No change
QNMILK1: Percentage of students who drank one or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)																
				50.7	50.3	48.5	48.7	46.6	48.1		41.4	39.1	30.8	Decreased, 1999-2017	Decreased, 1999-2013 Decreased, 2013-2017	Decreased
QNMILK2: Percentage of students who drank two or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)																
				37.2	37.7	32.3	33.1	30.3	31.5		25.9	24.2	17.4	Decreased, 1999-2017	Decreased, 1999-2013 Decreased, 2013-2017	Decreased
QNMILK3: Percentage of students who drank three or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)																
				20.5	21.0	17.7	16.8	14.6	16.1		12.2	11.2	7.5	Decreased, 1999-2017	No quadratic change	Decreased

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

White*
Weight Management and Dietary Behaviors

				Health Risk Behavior and Percentages										Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN78: Percentage of students who did not eat breakfast (during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											12.8	13.5	13.6	No linear change	Not available[¶]	No change

QNBK7DAY: Percentage of students who ate breakfast on all 7 days (during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
											36.5	33.9	33.2	No linear change	Not available	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

95

Missouri High School Survey
Trend Analysis Report

White*
Physical Activity

														Health Risk Behavior and Percentages		Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017					

QN79: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

											47.5	48.7	48.1	No linear change	Not available[¶]	No change

QNPA0DAY: Percentage of students who did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

											17.7	13.7	15.1	No linear change	Not available	No change

QNPA7DAY: Percentage of students who were physically active at least 60 minutes per day on all 7 days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

											28.4	27.9	29.7	No linear change	Not available	No change

QN80: Percentage of students who watched television 3 or more hours per day (on an average school day)

			31.6	32.5	27.2	28.3	22.7	26.1		21.8	18.8	19.4	Decreased, 1999-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Physical Activity

Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN81: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
								19.3	20.7		32.5	37.8	42.4	Increased, 2007-2017	Not available[¶]	No change

QN82: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		46.3	46.6	51.7	57.2	47.5	49.2	50.8	41.9		45.1	44.6	48.2	No linear change	No quadratic change	No change

QNDLYPE: Percentage of students who attended physical education (PE) classes on all 5 days (in an average week when they were in school)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		33.8	27.7	21.0	30.6	33.9	32.9	24.9	33.3		33.0	24.8	29.1	No linear change	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Other

Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN86: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)

| | | | | | | | | | | | | 72.6 | 72.3 | No linear change | Not available[¶] | No change |

QNNODNT: Percentage of students who never saw a dentist (for a check-up, exam, teeth cleaning, or other dental work)

| | | | | | | | | | | | | 2.2 | 2.3 | No linear change | Not available | No change |

QN87: Percentage of students who had ever been told by a doctor or nurse that they had asthma

| | | | | 17.8 | 19.8 | 18.7 | | | 23.3 | 20.3 | 25.1 | Increased, 2005-2017 | No quadratic change | No change |

QN88: Percentage of students who got 8 or more hours of sleep (on an average school night)

| | | | | | | | | | | | | 27.2 | 22.2 | Decreased, 2015-2017 | Not available | No change |

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

				Health Risk Behavior and Percentages										Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN90: Percentage of students who rarely or never wore a bicycle helmet (during the 12 months before the survey, among students who had ridden a bicycle)

| | | 96.2 | 92.7 | 91.4 | 89.6 | 86.8 | 87.3 | 83.3 | 79.7 | | 86.3 | 84.5 | 81.8 | Decreased, 1995-2017 | Decreased, 1995-2007 No change, 2007-2017 | No change |

QN91: Percentage of students who rarely or never wear a seat belt when driving (among students who drive a car)

| | | | | | | | | | | | 9.4 | 6.2 | 7.5 | No linear change | Not available[¶] | No change |

QN92: Percentage of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey, among students who drove a car or other vehicle)

| | | | | | | | | | | | 55.4 | 51.3 | 56.2 | No linear change | Not available | No change |

QN94: Percentage of students who were injured in a physical fight (one or more times during the 12 months before the survey; injuries had to be treated by a doctor or nurse)

| | | 3.7 | 2.5 | 3.0 | 2.9 | 2.4 | 3.0 | 3.4 | 2.4 | | 8.0 | 5.3 | 4.0 | Increased, 1995-2017 | Decreased, 1995-2003 Increased, 2003-2017 | No change |

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN97: Percentage of students who tried to quit smoking cigarettes (among students who smoked cigarettes during the 12 months before the survey)

| | | | | | | | | | | | | 48.9 | 53.1 | No linear change | Not available[¶] | No change |

QN100: Percentage of students who ever tried smoking cigars, cigarillos, or little cigars (even one or two puffs)

| | | | | | | | | | | | | 24.9 | 26.0 | 16.7 | Decreased, 2013-2017 | Not available | Decreased |

QN101: Percentage of students who have ever participated in a program to help them quit using tobacco (among students who have used tobacco)

| | | | | | | | | | | | | 8.3 | 11.8 | 6.8 | No linear change | Not available | No change |

QN102: Percentage of students who responded that their school has special groups or classes for students who want to quit using tobacco

| | | | | | | | | | | | | 3.8 | 2.1 | 2.5 | No linear change | Not available | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN103: Percentage of students who saw or heard ads about the dangers of cigarette smoking (on TV, the Internet or on the radio, on at least 1 day during the 30 days before the survey)

												80.0	79.5	No linear change	Not available[¶]	No change

QN104: Percentage of students who sometimes, most of the time, or always see ads for tobacco products when they use the Internet

												32.6	38.9	No linear change	Not available	No change

QN105: Percentage of students who live with someone that smokes cigarettes

											40.7	36.8	38.3	No linear change	Not available	No change

QN106: Percentage of students who were at home when someone was smoking tobacco products (on at least one day during the 7 days before the survey)

												28.0	30.9	No linear change	Not available	No change

QN107: Percentage of students who rode in a vehicle where someone was smoking tobacco products (on at least one day during the 7 days before the survey)

												32.2	37.7	No linear change	Not available	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

															Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
Health Risk Behavior and Percentages																	
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN108: Percentage of students who breathed the smoke from someone who was smoking tobacco products in indoor or outdoor public places (such as school buildings, stores, restaurants, stadiums, school grounds, parking lots, and parks, on at least one day during the 7 days before the survey)

	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
	50.4	53.1	No linear change	Not available[¶]	No change

QN109: Percentage of students who breathed the smoke from someone who was smoking tobacco products in the place where they worked (on at least one day during the 7 days before the survey, among students who worked during the 7 days before the survey)

	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
	22.9	25.9	No linear change	Not available	No change

QN110: Percentage of students who participated in any community activities to educate the public about the dangers of secondhand smoke (during the 12 months before the survey)

	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
7.9	5.1	5.0	No linear change	Not available	No change

QN111: Percentage of students who live in a home where smoking tobacco products is never allowed

	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
	76.4	73.2	No linear change	Not available	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN112: Percentage of students who ride in or drive family vehicles in which smoking tobacco products is never allowed

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
69.9	65.0	No linear change	Not available[¶]	No change

QN113: Percentage of students who think people should never allow smoking inside their home

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
80.1	79.7	No linear change	Not available	No change

QN114: Percentage of students who think people should never allow smoking in their vehicles

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
75.3	74.5	No linear change	Not available	No change

QN115: Percentage of students who think employers should never allow smoking in indoor areas in places where people work

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
86.6	87.8	No linear change	Not available	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN117: Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)

| | | | | | | | | | | | 51.4 | 53.8 | 47.5 | No linear change | Not available[¶] | No change |

QN118: Percentage of students who had been told by a doctor or nurse that they had asthma and who still have asthma

| | | | | | 10.5 | 10.4 | | | 11.3 | 9.8 | 12.3 | | | No linear change | Not available | No change |

QN119: Percentage of students who have ever been taught by a nurse or doctor how to take care of or manage their asthma (among students who have ever had asthma)

| | | | | | | | | | | | 52.7 | 53.5 | 57.3 | No linear change | Not available | No change |

QN120: Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not counting getting a spray-on tan], one or more times during the 12 months before the survey)

| | | | | | | | | | | | | 14.0 | 13.9 | No linear change | Not available | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

104

Missouri High School Survey
Trend Analysis Report

White*
Site-Added

	Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN122: Percentage of students who ate dinner at home with at least one of their parents on four or more days (during the 7 days before the survey)

												65.3	60.8	Decreased, 2015-2017	Not available[¶]	No change

QN123: Percentage of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement

												61.1	63.4	No linear change	Not available	No change

QN124: Percentage of students who most of the time or always get the kind of help they need (among students who report having felt sad, empty, hopeless, angry, or anxious)

												28.4	28.2	No linear change	Not available	No change

QN125: Percentage of students who participate in school activities one or more hours (such as sports, band, drama, or clubs, during an average week when they are in school)

												70.4	67.0	No linear change	Not available	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Injury and Violence

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN8: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		38.3	39.0	33.4	20.3	25.4	12.5	17.0	21.3		14.6	11.6	13.7	Decreased, 1995-2017	Decreased, 1995-2005 No change, 2005-2017	No change

QN9: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)

| | | 43.9 | 28.9 | 30.9 | 26.6 | 37.8 | 26.4 | 25.2 | 26.0 | | 23.7 | 20.5 | 19.7 | Decreased, 1995-2017 | No quadratic change | No change |

QN12: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

| | | 32.5 | 19.6 | 24.4 | 17.5 | 17.0 | 18.9 | 19.2 | 19.1 | | 12.2 | 14.8 | 9.8 | Decreased, 1995-2017 | No quadratic change | No change |

QN13: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 3.5 | 2.5 | No linear change | Not available[¶] | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

106

Missouri High School Survey
Trend Analysis Report

Black*
Injury and Violence

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN15: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 8.4 | 8.5 | No linear change | Not available[¶] | No change |

QN19: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)

| | | | | | 8.8 | 11.9 | 9.9 | 10.4 | 8.6 | | 16.6 | 10.1 | 8.0 | No linear change | No quadratic change | No change |

QN23: Percentage of students who were bullied on school property (ever during the 12 months before the survey)

| | | | | | | | | 16.3 | | 18.8 | 15.2 | 17.4 | | No linear change | Not available | No change |

QN24: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)

| | | | | | | | | | | | | 13.3 | 13.5 | No linear change | Not available | No change |

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Injury and Violence

							Health Risk Behavior and Percentages							Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN25: Percentage of students who felt sad or hopeless (almost every day for >=2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)

| | | | | 22.5 | 28.8 | 29.1 | 26.8 | 23.3 | 29.5 | | 30.2 | 26.8 | 26.0 | No linear change | No quadratic change | No change |

QN26: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)

| | | 19.9 | 17.3 | 10.4 | 17.0 | 15.1 | 10.6 | 12.0 | 17.1 | | 11.4 | 11.1 | 18.7 | No linear change | No quadratic change | No change |

QN27: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)

| | | 19.6 | 9.9 | 7.4 | 15.1 | 9.9 | 8.5 | 9.0 | 12.3 | | 7.4 | 13.8 | 8.5 | No linear change | No quadratic change | No change |

QN28: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)

| | | 14.8 | 8.1 | 3.7 | 9.6 | 10.2 | 7.5 | 9.0 | 8.5 | | 5.4 | 12.6 | 6.9 | No linear change | No quadratic change | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Black*
Injury and Violence

					Health Risk Behavior and Percentages									Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN29: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)

| | | 8.0 | 2.5 | 1.9 | 2.5 | 2.0 | 3.7 | 1.5 | 3.9 | | 0.8 | 3.1 | 4.1 | No linear change | No quadratic change | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Black*
Tobacco Use

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN30: Percentage of students who ever tried cigarette smoking (even one or two puffs)

		76.6	73.8	66.9	61.1	65.8	42.9	54.6	48.2		41.7	35.7	17.0	Decreased, 1995-2017	No quadratic change	Decreased

QN32: Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)

		23.9	21.9	16.9	14.4	17.2	9.6	15.0	15.7		11.3	5.9	5.0	Decreased, 1995-2017	No quadratic change	No change

QNFRCIG: Percentage of students who currently smoked cigarettes frequently (on 20 or more days during the 30 days before the survey)

		9.4	9.1	6.1	6.5	7.8	3.4	7.3	5.0		4.3	2.9	1.1	Decreased, 1995-2017	No quadratic change	No change

QNDAYCIG: Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)

		6.8	5.9	4.6	5.9	6.4	2.4	3.7	3.2		3.4	1.8	1.1	Decreased, 1995-2017	No quadratic change	No change

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Black*
Tobacco Use

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN34: Percentage of students who ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo])

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												34.3	35.4	No linear change	Not available[¶]	No change

QN35: Percentage of students who currently used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo], on at least 1 day during the 30 days before the survey)

												2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
												19.5	6.2	Decreased, 2015-2017	Not available	Decreased

QN38: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
14.4	13.6	16.2	17.9	16.6	17.2		15.2	10.6	8.1	No linear change	No change, 1999-2013 No change, 2013-2017	No change

QNTB2: Percentage of students who currently smoked cigarettes or cigars (on at least 1 day during the 30 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
24.5	20.2	23.8	20.2	24.0	24.6		20.8	14.2	10.9	Decreased, 1999-2017	No quadratic change	No change

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Alcohol and Other Drug Use

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017[§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN41: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)																
		37.4	30.1	36.2	30.0	34.0	29.3	22.4	26.3		16.0	25.8	16.8	Decreased, 1995-2017	No quadratic change	No change
QN42: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)																
		43.5	32.4	36.0	34.1	45.6	31.0	29.8	37.6		29.1	24.9	22.9	Decreased, 1995-2017	No quadratic change	No change
QN48: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)																
		32.3	33.5	34.0	22.9	29.7	20.3	24.3	29.3		28.2	21.3	21.7	Decreased, 1995-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Black*
Sexual Behaviors

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN59: Percentage of students who ever had sexual intercourse

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		78.6	75.8	71.6	64.3	62.9	64.7	67.4	70.2		60.7	41.8	41.7	Decreased, 1995-2017	No quadratic change	No change

QN60: Percentage of students who had sexual intercourse for the first time before age 13 years

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		29.3	22.6	19.0	13.3	21.2	13.6	16.3	14.5		10.2	8.7	4.3	Decreased, 1995-2017	No quadratic change	No change

QN62: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
		63.7	52.0	53.0	46.9	48.2	44.0	52.2	48.2		40.0	25.9	31.0	Decreased, 1995-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Black*
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNOWT: Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[¶]

| | | | | 20.7 | 18.0 | 19.5 | 15.6 | 18.0 | 20.6 | | 18.8 | 17.7 | 17.6 | No linear change | No quadratic change | No change |

QNOBESE: Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[¶]

| | | | | 10.2 | 18.5 | 7.4 | 21.1 | 20.2 | 15.5 | | 16.2 | 17.2 | 17.6 | Increased, 1999-2017 | Increased, 1999-2007 No change, 2007-2017 | No change |

QN70: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)

| | | | | 17.5 | 14.4 | 22.7 | 14.4 | 17.3 | 23.2 | | 28.6 | 22.9 | 29.3 | Increased, 1999-2017 | No quadratic change | No change |

QN71: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

| | | | | 21.5 | 24.8 | 20.2 | 24.4 | 22.0 | 20.2 | | 12.8 | 14.6 | 17.9 | Decreased, 1999-2017 | No quadratic change | No change |

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Overweight and obese prevalence estimates for 1999 differ slightly from previously published results because different BMI cut points were used in 1999 than in subsequent years. To make these prevalence estimates comparable, the 1999 prevalence estimates were recalculated using the updated BMI cut points. In addition, beginning in 2017, new, slightly different ranges were used to calculate biologically implausible responses to height and weight questions.

Missouri High School Survey
Trend Analysis Report

Black*
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages													Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNFR0: Percentage of students who did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 7.7 | 5.3 | 9.1 | 6.9 | 7.3 | 10.4 | | 8.8 | 6.6 | 8.3 | No linear change | No quadratic change | No change |

QNFR1: Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 61.6 | 64.7 | 56.7 | 57.5 | 57.8 | 58.6 | | 59.4 | 56.4 | 55.6 | No linear change | No quadratic change | No change |

QNFR2: Percentage of students who ate fruit or drank 100% fruit juices two or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 35.2 | 38.9 | 33.7 | 27.2 | 32.6 | 34.1 | | 32.3 | 27.8 | 22.4 | Decreased, 1999-2017 | No quadratic change | No change |

QNFR3: Percentage of students who ate fruit or drank 100% fruit juices three or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

| | | | | 26.6 | 31.3 | 26.3 | 21.4 | 25.0 | 24.9 | | 25.3 | 21.1 | 15.7 | No linear change | No quadratic change | No change |

---

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Black*
Weight Management and Dietary Behaviors

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN72: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)

				1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				47.7	46.9	43.1	49.3	45.9	50.5		48.5	53.5	50.1	No linear change	No quadratic change	No change

QN73: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
37.5	30.8	38.3	39.3	42.8	37.8		34.9	38.1	45.5	No linear change	No quadratic change	No change

QN74: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
77.1	70.5	68.3	74.6	72.6	67.3		69.5	71.5	70.1	No linear change	No quadratic change	No change

QN75: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)

1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
26.2	20.4	18.2	21.0	25.5	27.2		31.1	31.8	27.0	Increased, 1999-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Black*
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QNVEG0: Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017	Linear	Quadratic	Change
				11.9	5.8	6.4	10.8	13.9	13.4		12.1	11.5	9.7	No linear change	No quadratic change	No change

QNVEG1: Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1999	2001	2003	2005	2007	2009	2013	2015	2017	Linear	Quadratic	Change
45.4	54.7	55.1	47.3	44.9	49.0	45.7	48.0	46.3	No linear change	No quadratic change	No change

QNVEG2: Percentage of students who ate vegetables two or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1999	2001	2003	2005	2007	2009	2013	2015	2017	Linear	Quadratic	Change
19.1	23.1	17.3	17.9	22.6	21.7	21.3	23.5	15.6	No linear change	No quadratic change	No change

QNVEG3: Percentage of students who ate vegetables three or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

1999	2001	2003	2005	2007	2009	2013	2015	2017	Linear	Quadratic	Change
11.7	14.0	6.9	10.3	14.5	15.4	13.3	15.5	8.6	No linear change	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.

Missouri High School Survey
Trend Analysis Report

Black*
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages			Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			
QN77: Percentage of students who did not drink milk (during the 7 days before the survey)																
				30.9	26.9	28.4	23.8	32.2	33.3		29.8	35.8	41.3	Increased, 1999-2017	No quadratic change	No change
QNMILK1: Percentage of students who drank one or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)																
				30.0	34.0	31.1	28.4	28.5	29.6		22.6	20.7	19.7	Decreased, 1999-2017	No quadratic change	No change
QNMILK2: Percentage of students who drank two or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)																
				20.0	25.2	22.1	16.8	18.3	22.8		12.2	10.9	12.0	Decreased, 1999-2017	No quadratic change	No change
QNMILK3: Percentage of students who drank three or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)																
				9.9	16.4	6.0	10.2	10.6	13.8		6.5	6.0	5.4	Decreased, 1999-2017	No quadratic change	No change

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.

Missouri High School Survey
Trend Analysis Report

Black*
Weight Management and Dietary Behaviors

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN78: Percentage of students who did not eat breakfast (during the 7 days before the survey)

											19.7	21.3	16.7	No linear change	Not available[¶]	No change

QNBK7DAY: Percentage of students who ate breakfast on all 7 days (during the 7 days before the survey)

											33.7	18.9	31.3	No linear change	Not available	Increased

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Physical Activity

														Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QN79: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 39.3 | 37.9 | 39.5 | | No linear change | Not available[¶] | No change |

QNPA0DAY: Percentage of students who did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 13.8 | 23.7 | 23.3 | | No linear change | Not available | No change |

QNPA7DAY: Percentage of students who were physically active at least 60 minutes per day on all 7 days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

| | | | | | | | | | | | 24.0 | 19.5 | 24.5 | | No linear change | Not available | No change |

QN80: Percentage of students who watched television 3 or more hours per day (on an average school day)

| | | | 60.0 | 66.9 | 58.1 | 61.5 | 59.1 | 58.0 | | 43.8 | 32.3 | 29.9 | | Decreased, 1999-2017 | No change, 1999-2009 Decreased, 2009-2017 | No change |

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

120

Missouri High School Survey
Trend Analysis Report

Black*
Physical Activity

					Health Risk Behavior and Percentages									Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN81: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)

| | | | | | | | | 29.5 | 31.2 | | 34.0 | 37.3 | 45.7 | Increased, 2007-2017 | Not available[¶] | No change |

QN82: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school)

| | | 52.3 | 43.5 | 47.9 | 48.5 | 59.6 | 52.6 | 50.7 | 52.8 | | 46.0 | 50.7 | 55.0 | No linear change | No quadratic change | No change |

QNDLYPE: Percentage of students who attended physical education (PE) classes on all 5 days (in an average week when they were in school)

| | | 39.9 | 33.5 | 19.4 | 26.8 | 28.8 | 24.2 | 20.7 | 30.1 | | 20.6 | 16.0 | 25.4 | No linear change | No quadratic change | No change |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Other

Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN86: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)

| | | | | | | | | | | | | 59.0 | 63.1 | No linear change | Not available[¶] | No change |

QNNODNT: Percentage of students who never saw a dentist (for a check-up, exam, teeth cleaning, or other dental work)

| | | | | | | | | | | | | 5.5 | 1.5 | No linear change | Not available | No change |

QN87: Percentage of students who had ever been told by a doctor or nurse that they had asthma

| | | | | | 27.0 | 25.4 | 28.0 | | 28.4 | 31.0 | 32.0 | | | No linear change | No quadratic change | No change |

QN88: Percentage of students who got 8 or more hours of sleep (on an average school night)

| | | | | | | | | | | | | 27.8 | 14.1 | Decreased, 2015-2017 | Not available | Decreased |

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Site-Added

															Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
Health Risk Behavior and Percentages																	
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QN91: Percentage of students who rarely or never wear a seat belt when driving (among students who drive a car)

												9.8	12.8	No linear change	Not available[¶]	No change

QN94: Percentage of students who were injured in a physical fight (one or more times during the 12 months before the survey; injuries had to be treated by a doctor or nurse)

	9.0	8.1	5.4	5.4	8.3	6.1	10.3	7.9		9.7	9.6	5.2	No linear change	No quadratic change	No change

QN100: Percentage of students who ever tried smoking cigars, cigarillos, or little cigars (even one or two puffs)

											17.9	18.1	12.6	No linear change	Not available	No change

QN102: Percentage of students who responded that their school has special groups or classes for students who want to quit using tobacco

											4.1	5.2	7.5	No linear change	Not available	No change

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Site-Added

	Health Risk Behavior and Percentages	Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN103: Percentage of students who saw or heard ads about the dangers of cigarette smoking (on TV, the Internet or on the radio, on at least 1 day during the 30 days before the survey)

												73.2	75.6	No linear change	Not available[¶]	No change

QN104: Percentage of students who sometimes, most of the time, or always see ads for tobacco products when they use the Internet

												35.8	52.0	Increased, 2015-2017	Not available	Increased

QN105: Percentage of students who live with someone that smokes cigarettes

											44.0	36.7	35.0	No linear change	Not available	No change

QN106: Percentage of students who were at home when someone was smoking tobacco products (on at least one day during the 7 days before the survey)

												31.9	30.9	No linear change	Not available	No change

QN107: Percentage of students who rode in a vehicle where someone was smoking tobacco products (on at least one day during the 7 days before the survey)

												32.3	33.9	No linear change	Not available	No change

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Site-Added

	Health Risk Behavior and Percentages														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN108: Percentage of students who breathed the smoke from someone who was smoking tobacco products in indoor or outdoor public places (such as school buildings, stores, restaurants, stadiums, school grounds, parking lots, and parks, on at least one day during the 7 days before the survey)

												43.8	39.5	No linear change	Not available[¶]	No change

QN110: Percentage of students who participated in any community activities to educate the public about the dangers of secondhand smoke (during the 12 months before the survey)

											11.3	11.0	6.6	No linear change	Not available	No change

QN111: Percentage of students who live in a home where smoking tobacco products is never allowed

												71.2	73.0	No linear change	Not available	No change

QN112: Percentage of students who ride in or drive family vehicles in which smoking tobacco products is never allowed

												68.2	71.3	No linear change	Not available	No change

[*]Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[§]Based on t-test analysis, p < 0.05.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Site-Added

Health Risk Behavior and Percentages

														Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN113: Percentage of students who think people should never allow smoking inside their home

| | | | | | | | | | | | | 80.6 | 83.3 | No linear change | Not available[¶] | No change |

QN114: Percentage of students who think people should never allow smoking in their vehicles

| | | | | | | | | | | | | 80.8 | 81.8 | No linear change | Not available | No change |

QN115: Percentage of students who think employers should never allow smoking in indoor areas in places where people work

| | | | | | | | | | | | | 84.7 | 89.4 | No linear change | Not available | No change |

QN117: Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)

| | | | | | | | | | | | | 45.4 | 38.8 | 48.1 | No linear change | Not available | Increased |

---

*Non-Hispanic.
[†]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[§]Based on t-test analysis, $p < 0.05$.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Site-Added

							Health Risk Behavior and Percentages							Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN118: Percentage of students who had been told by a doctor or nurse that they had asthma and who still have asthma

| | | | | | | | | 17.4 | 16.3 | | 18.6 | 18.4 | 19.2 | No linear change | Not available[¶] | No change |

QN120: Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not counting getting a spray-on tan], one or more times during the 12 months before the survey)

| | | | | | | | | | 9.2 | | | 8.4 | | No linear change | Not available | No change |

QN122: Percentage of students who ate dinner at home with at least one of their parents on four or more days (during the 7 days before the survey)

| | | | | | | | | | 50.7 | | | 54.2 | | No linear change | Not available | No change |

QN123: Percentage of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement

| | | | | | | | | | 50.1 | | | 54.4 | | No linear change | Not available | No change |

*Non-Hispanic.
†Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
§Based on t-test analysis, p < 0.05.
¶Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Black*
Site-Added

															Linear Change[†]	Quadratic Change[†]	Change from 2015-2017 [§]
Health Risk Behavior and Percentages																	
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QN124: Percentage of students who most of the time or always get the kind of help they need (among students who report having felt sad, empty, hopeless, angry, or anxious)

												2015	2017	Linear	Quadratic	Change
												19.4	20.8	No linear change	Not available[¶]	No change

QN125: Percentage of students who participate in school activities one or more hours (such as sports, band, drama, or clubs, during an average week when they are in school)

| | | | | | | | | | | | | 59.2 | 59.9 | No linear change | Not available | No change |

Missouri High School Survey
Trend Analysis Report

Hispanic
Injury and Violence

														Health Risk Behavior and Percentages		Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017					

QN8: Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
23.9	14.1	13.2	Decreased, 2013-2017	Not available[§]	No change

QN9: Percentage of students who rode with a driver who had been drinking alcohol (in a car or other vehicle, one or more times during the 30 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
35.7	28.6	22.5	Decreased, 2013-2017	Not available	No change

QN12: Percentage of students who carried a weapon (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
25.1	24.3	19.1	No linear change	Not available	No change

QN13: Percentage of students who carried a weapon on school property (such as a gun, knife, or club, on at least 1 day during the 30 days before the survey)

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
8.0	4.8	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Injury and Violence

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN15: Percentage of students who did not go to school because they felt unsafe at school or on their way to or from school (on at least 1 day during the 30 days before the survey)

												11.1	11.0	No linear change	Not available[§]	No change

QN19: Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)

												16.3	15.9	16.2	No linear change	Not available	No change

| | | | | | | | | | | | | 16.3 | 15.9 | No linear change | Not available | No change |

Actually the values 16.3, 15.9, 16.2 span 2013, 2015, 2017.

QN19 values: 16.3 (2013), 15.9 (2015), 16.2 (2017), No linear change, Not available, No change

QN23: Percentage of students who were bullied on school property (ever during the 12 months before the survey)

23.2 (2013), 25.1 (2015), 25.5 (2017), No linear change, Not available, No change

QN24: Percentage of students who were electronically bullied (counting being bullied through texting, Instagram, Facebook, or other social media, ever during the 12 months before the survey)

17.0 (2015), 21.2 (2017), No linear change, Not available, No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

130

Missouri High School Survey
Trend Analysis Report

Hispanic
Injury and Violence

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN25: Percentage of students who felt sad or hopeless (almost every day for >=2 weeks in a row so that they stopped doing some usual activities, ever during the 12 months before the survey)

| | | | | | | | | | | | 42.7 | 38.0 | 37.4 | No linear change | Not available[§] | No change |

QN26: Percentage of students who seriously considered attempting suicide (ever during the 12 months before the survey)

| | | | | | | | | | | | 23.0 | 21.2 | 25.4 | No linear change | Not available | No change |

QN27: Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)

| | | | | | | | | | | | 20.0 | 17.7 | 19.2 | No linear change | Not available | No change |

QN28: Percentage of students who attempted suicide (one or more times during the 12 months before the survey)

| | | | | | | | | | | | 17.8 | 12.2 | 10.9 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Injury and Violence

														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN29: Percentage of students who had a suicide attempt that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse (during the 12 months before the survey)

														Linear Change	Quadratic Change	Change from 2015-2017
											3.8	7.2	3.4	No linear change	Not available[§]	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Tobacco Use

														Health Risk Behavior and Percentages	Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN30: Percentage of students who ever tried cigarette smoking (even one or two puffs)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
50.7	39.0	30.2	Decreased, 2013-2017	Not available[§]	No change

QN32: Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
21.6	13.3	8.7	No linear change	Not available	No change

QNFRCIG: Percentage of students who currently smoked cigarettes frequently (on 20 or more days during the 30 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
6.6	4.4	2.6	No linear change	Not available	No change

QNDAYCIG: Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
4.9	3.2	1.9	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Tobacco Use

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**			

QN34: Percentage of students who ever used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo])

| | | | | | | | | | | | | 44.3 | 39.2 | No linear change | Not available[§] | No change |

QN35: Percentage of students who currently used an electronic vapor product (including e-cigarettes, e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens [such as blu, NJOY, Vuse, MarkTen, Logic, Vapin Plus, eGo, and Halo], on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 19.7 | 7.5 | Decreased, 2015-2017 | Not available | Decreased |

QN38: Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | 22.8 | 13.6 | 7.0 | Decreased, 2013-2017 | Not available | No change |

QNTB2: Percentage of students who currently smoked cigarettes or cigars (on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | 28.3 | 22.1 | 11.7 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Alcohol and Other Drug Use

Health Risk Behavior and Percentages			Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN41: Percentage of students who had their first drink of alcohol before age 13 years (other than a few sips)

| | | | | | | | | | | | 37.0 | 24.0 | 17.8 | Decreased, 2013-2017 | Not available[§] | No change |

QN42: Percentage of students who currently drank alcohol (at least one drink of alcohol, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | 49.2 | 34.1 | 27.0 | Decreased, 2013-2017 | Not available | No change |

QN48: Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)

| | | | | | | | | | | | 31.6 | 20.4 | 17.8 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Sexual Behaviors

	Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN59: Percentage of students who ever had sexual intercourse

											52.2	40.0	39.8	No linear change	Not available[§]	No change

QN60: Percentage of students who had sexual intercourse for the first time before age 13 years

											10.0	8.6	6.2	No linear change	Not available	No change

QN62: Percentage of students who were currently sexually active (had sexual intercourse with at least one person, during the 3 months before the survey)

											41.3	28.2	29.8	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages															Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QNOWT: Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

											15.2	20.5	17.0	No linear change	Not available[¶]	No change

QNOBESE: Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth charts)[§]

											18.3	10.5	24.1	No linear change	Not available	Increased

QN70: Percentage of students who did not drink fruit juice (100% fruit juices one or more times during the 7 days before the survey)

											26.3	27.0	29.0	No linear change	Not available	No change

QN71: Percentage of students who did not eat fruit (one or more times during the 7 days before the survey)

											19.3	9.5	17.9	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Overweight and obese prevalence estimates for 1999 differ slightly from previously published results because different BMI cut points were used in 1999 than in subsequent years. To make these prevalence estimates comparable, the 1999 prevalence estimates were recalculated using the updated BMI cut points. In addition, beginning in 2017, new, slightly different ranges were used to calculate biologically implausible responses to height and weight questions.
[¶]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Weight Management and Dietary Behaviors

															Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																	
1991	**1993**	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**	**2007**	**2009**	**2011**	**2013**	**2015**	**2017**				

QNFR0: Percentage of students who did not eat fruit or drink 100% fruit juices (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

															Linear Change	Quadratic Change	Change from 2015-2017
											7.8	4.3	12.4		No linear change	Not available[§]	No change

QNFR1: Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

											48.7	61.0	55.8		No linear change	Not available	No change

QNFR2: Percentage of students who ate fruit or drank 100% fruit juices two or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

											23.9	25.2	29.9		No linear change	Not available	No change

QNFR3: Percentage of students who ate fruit or drank 100% fruit juices three or more times per day (such as orange juice, apple juice, or grape juice, during the 7 days before the survey)

											15.2	17.2	19.0		No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 †
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN72: Percentage of students who did not eat green salad (one or more times during the 7 days before the survey)

											43.2	48.5	49.9	No linear change	Not available§	No change

QN73: Percentage of students who did not eat potatoes (one or more times during the 7 days before the survey)

											34.8	39.7	40.9	No linear change	Not available	No change

QN74: Percentage of students who did not eat carrots (one or more times during the 7 days before the survey)

											61.1	53.3	55.9	No linear change	Not available	No change

QN75: Percentage of students who did not eat other vegetables (one or more times during the 7 days before the survey)

											24.8	22.2	24.4	No linear change	Not available	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
†Based on t-test analysis, $p < 0.05$.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages				Linear Change*	Quadratic Change*	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QNVEG0: Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | | | | | | | | 8.8 | 9.8 | 18.4 | No linear change | Not available[§] | No change |

QNVEG1: Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | | | | | | | | 53.0 | 53.6 | 54.0 | No linear change | Not available | No change |

QNVEG2: Percentage of students who ate vegetables two or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | | | | | | | | 23.6 | 18.8 | 25.9 | No linear change | Not available | No change |

QNVEG3: Percentage of students who ate vegetables three or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)

| | | | | | | | | | | | 16.5 | 7.8 | 14.3 | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages														Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN77: Percentage of students who did not drink milk (during the 7 days before the survey)

| | | | | | | | | | | | 22.0 | 21.6 | 28.3 | No linear change | Not available[§] | No change |

QNMILK1: Percentage of students who drank one or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | | | | | | | | 34.3 | 29.8 | 27.4 | No linear change | Not available | No change |

QNMILK2: Percentage of students who drank two or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | | | | | | | | 16.2 | 18.8 | 14.4 | No linear change | Not available | No change |

QNMILK3: Percentage of students who drank three or more glasses per day of milk (counting the milk they drank in a glass or cup, from a carton, or with cereal and counting the half pint of milk served at school as equal to one glass, during the 7 days before the survey)

| | | | | | | | | | | | 6.8 | 8.3 | 5.4 | No linear change | Not available | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Weight Management and Dietary Behaviors

Health Risk Behavior and Percentages			Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011	2013	2015	2017		

QN78: Percentage of students who did not eat breakfast (during the 7 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
15.0	23.2	18.8	No linear change	Not available[§]	No change

QNBK7DAY: Percentage of students who ate breakfast on all 7 days (during the 7 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
26.6	28.2	26.6	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Physical Activity

														Health Risk Behavior and Percentages	Linear Change*	Quadratic Change*	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN79: Percentage of students who were physically active at least 60 minutes per day on 5 or more days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
33.0	38.7	44.4	No linear change	Not available[§]	No change

QNPA0DAY: Percentage of students who did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
20.5	19.8	16.5	No linear change	Not available	No change

QNPA7DAY: Percentage of students who were physically active at least 60 minutes per day on all 7 days (in any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
19.0	23.0	25.2	No linear change	Not available	No change

QN80: Percentage of students who watched television 3 or more hours per day (on an average school day)

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
30.5	21.8	22.4	No linear change	Not available	No change

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Physical Activity

	Health Risk Behavior and Percentages													Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN81: Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting, YouTube, Instagram, Facebook, or other social media, for something that was not school work, on an average school day)

| | | | | | | | | | | | 34.6 | 31.2 | 38.5 | No linear change | Not available[§] | No change |

QN82: Percentage of students who attended physical education (PE) classes on 1 or more days (in an average week when they were in school)

| | | | | | | | | | | | 53.2 | 52.0 | 53.1 | No linear change | Not available | No change |

QNDLYPE: Percentage of students who attended physical education (PE) classes on all 5 days (in an average week when they were in school)

| | | | | | | | | | | | 25.6 | 18.9 | 27.7 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Other

															Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
Health Risk Behavior and Percentages																	
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017				

QN86: Percentage of students who saw a dentist (for a check-up, exam, teeth cleaning, or other dental work, during the 12 months before the survey)

												62.1	66.5	No linear change	Not available[§]	No change

QNNODNT: Percentage of students who never saw a dentist (for a check-up, exam, teeth cleaning, or other dental work)

												2.4	3.4	No linear change	Not available	No change

QN87: Percentage of students who had ever been told by a doctor or nurse that they had asthma

											24.8	18.1	34.5	No linear change	Not available	Increased

QN88: Percentage of students who got 8 or more hours of sleep (on an average school night)

												31.5	17.7	No linear change	Not available	Decreased

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

**Hispanic
Site-Added**

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN94: Percentage of students who were injured in a physical fight (one or more times during the 12 months before the survey; injuries had to be treated by a doctor or nurse)

| | | | | | | | | | | | 16.5 | 8.3 | 4.3 | Decreased, 2013-2017 | Not available[§] | No change |

QN100: Percentage of students who ever tried smoking cigars, cigarillos, or little cigars (even one or two puffs)

| | | | | | | | | | | | 27.9 | 26.3 | 13.1 | Decreased, 2013-2017 | Not available | No change |

QN102: Percentage of students who responded that their school has special groups or classes for students who want to quit using tobacco

| | | | | | | | | | | | 7.2 | 2.2 | 8.1 | No linear change | Not available | No change |

QN103: Percentage of students who saw or heard ads about the dangers of cigarette smoking (on TV, the Internet or on the radio, on at least 1 day during the 30 days before the survey)

| | | | | | | | | | | | | 77.6 | 71.2 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN104: Percentage of students who sometimes, most of the time, or always see ads for tobacco products when they use the Internet

| | | | | | | | | | | | | 33.8 | 36.1 | No linear change | Not available[§] | No change |

QN105: Percentage of students who live with someone that smokes cigarettes

| | | | | | | | | | | | | 38.3 | 32.1 | 46.4 | No linear change | Not available | No change |

2013	2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
38.3	32.1	46.4	No linear change	Not available	No change

QN106: Percentage of students who were at home when someone was smoking tobacco products (on at least one day during the 7 days before the survey)

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
24.0	28.9	No linear change	Not available	No change

QN107: Percentage of students who rode in a vehicle where someone was smoking tobacco products (on at least one day during the 7 days before the survey)

2015	2017	Linear Change	Quadratic Change	Change from 2015-2017
25.8	24.3	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN108: Percentage of students who breathed the smoke from someone who was smoking tobacco products in indoor or outdoor public places (such as school buildings, stores, restaurants, stadiums, school grounds, parking lots, and parks, on at least one day during the 7 days before the survey)

												42.2	43.1	No linear change	Not available[§]	No change

QN110: Percentage of students who participated in any community activities to educate the public about the dangers of secondhand smoke (during the 12 months before the survey)

										9.6	4.0	17.5		No linear change	Not available	No change

QN111: Percentage of students who live in a home where smoking tobacco products is never allowed

												76.9	77.2	No linear change	Not available	No change

QN112: Percentage of students who ride in or drive family vehicles in which smoking tobacco products is never allowed

												70.1	74.2	No linear change	Not available	No change

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Site-Added

Health Risk Behavior and Percentages														Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]
1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN113: Percentage of students who think people should never allow smoking inside their home

| | | | | | | | | | | | | 81.4 | 84.5 | No linear change | Not available[§] | No change |

QN114: Percentage of students who think people should never allow smoking in their vehicles

| | | | | | | | | | | | | 77.2 | 83.3 | No linear change | Not available | No change |

QN115: Percentage of students who think employers should never allow smoking in indoor areas in places where people work

| | | | | | | | | | | | | 86.0 | 88.2 | No linear change | Not available | No change |

QN117: Percentage of students who did exercises to strengthen or tone their muscles on three or more days (such as push-ups, sit-ups, or weight lifting, during the 7 days before the survey)

| | | | | | | | | | | | 49.1 | 51.9 | 46.9 | No linear change | Not available | No change |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
[†]Based on t-test analysis, p < 0.05.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Site-Added

Health Risk Behavior and Percentages			Linear Change[*]	Quadratic Change[*]	Change from 2015-2017 [†]

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN118: Percentage of students who had been told by a doctor or nurse that they had asthma and who still have asthma

| | | | | | | | | | | | 8.8 | 9.9 | 15.1 | No linear change | Not available[§] | No change |

QN120: Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not counting getting a spray-on tan], one or more times during the 12 months before the survey)

| | | | | | | | | | | | | 13.6 | 8.8 | No linear change | Not available | No change |

QN122: Percentage of students who ate dinner at home with at least one of their parents on four or more days (during the 7 days before the survey)

| | | | | | | | | | | | | 61.6 | 51.3 | No linear change | Not available | No change |

QN123: Percentage of students who strongly agree or agree that their teachers really care about them and give them a lot of encouragement

| | | | | | | | | | | | | 57.6 | 69.6 | Increased, 2015-2017 | Not available | Increased |

[*]Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, $p < 0.05$.
[†]Based on t-test analysis, $p < 0.05$.
[§]Not enough years of data to calculate.

Missouri High School Survey
Trend Analysis Report

Hispanic
Site-Added

															Linear Change*	Quadratic Change*	Change from 2015-2017 †

Health Risk Behavior and Percentages

1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017			

QN125: Percentage of students who participate in school activities one or more hours (such as sports, band, drama, or clubs, during an average week when they are in school)

| | | | | | | | | | | | | 59.8 | 53.8 | No linear change | Not available§ | No change |

*Based on trend analyses using a logistic regression model controlling for sex, race/ethnicity, and grade, p < 0.05.
†Based on t-test analysis, p < 0.05.
§Not enough years of data to calculate.