

young adults 18-25 years of age dropped from 47.59 percent in 2002/2003 to 45.50 percent in 2003/2004 and to 44.84 percent in 2004/2005. Smoking rates for adults over age 25 dipped from 30.56 percent to 29.11 percent during the same time period.

Cigarette Use by ADA Planning Region: Consistent with regional rates for use of tobacco products, cigarette smoking rates based on the 2002-2004 NSDUH samples were higher in the non-urban regions of the state. Past-month use of cigarettes was highest among the adolescent and adult population 12 years of age and older in the Southeast Region at 35.02 percent, considerably higher than the statewide estimate of 31.10 percent. The Central Region had the second-highest cigarette smoking rate at 31.85 percent, followed closely by a Southwest Region rate of 31.49 percent. The Northwest Region had a past-month smoking rate of 30.32 percent, and there was virtually no difference between rates in Jackson County and the remainder of the region. The Eastern Region had a smoking rate of 29.80 percent, but the St. Louis City and St. Louis County had a rate of 29.30 percent compared to 30.81 percent in the less-urban counties.

Perceptions of Cigarette Smoking Risk: The overall percentage of Missouri residents who perceive great risk in smoking one or more packs of cigarettes per day has not changed appreciably in recent years, although more adolescents are recognizing such risk. Data from the combined 2002/2003 NSDUH samples indicate that 68.02 percent of the Missouri population 12 years of age and older perceived great smoking risk, compared to 71.27 percent of the U.S. population. In 2003/2004, the nationwide rate increased to 72.83 percent—a statistically significant change—and the Missouri rate increased to 69.41 percent. In 2004/2005, the Missouri rate remained virtually unchanged at 69.74 percent while the U.S. rate again increased significantly to 74.35 percent. Although smaller percentages of adolescents than adults perceive great risk in smoking one or more packs of cigarettes per day, their percentages are increasing nationwide and in Missouri. Among Missouri's population 12-17 years of age, perceived risk increased from 61.78 percent in 2002/2003 to 63.07 percent in 2003/2004, and then statistically increased to 65.95 percent in 2004/2005. During this time period, the U.S. rate for adolescents increased from 63.67 percent in 2002/2003 to 65.87 percent in 2003/2004 and to 67.94 percent in 2004/2005. Both of these national rate increases for this age group were statistically significant. Young adults 18-25 years of age have also made some progress in recognizing smoking risk. While Missouri's young adults had an estimated rate of 61.37 percent in 2002/2003, the national rate was 65.46 percent. Both of these rates increased significantly in 2003/2004 to 65.29 percent in Missouri and 67.81 percent in the U.S. In 2004/2005, Missouri's rate was 64.66 percent while the national rate continued to advance to 69.82 percent. Perceived smoking risk has not changed significantly among Missouri adults older than 25. Missouri's rate for this age group was 70.06 percent in 2002/2003, 71.02 percent in 2003/2004, and 71.17 percent in 2004/2005. Nationwide, statistically significant gains have occurred during these years. The U.S. rate for older adults increased from 73.33 percent in 2002/2003 to 74.67 percent in 2003/2004, and then increased to 76.02 percent in 2004/2005.

Other NSDUH Measures: Implications of the NSDUH survey data are summarized in the *Substance Abuse Treatment Need* section on page 19. These include estimates of alcohol abuse and dependence, illicit drug abuse and dependence, co-occurring substance abuse and mental health disorders, and unmet need for treatment.

### ***Youth Risk Behavior Survey***

The Youth Risk Behavior Survey (YRBS) is administered by the federal Centers for Disease Control and Prevention. The survey is conducted nationwide to students in high school grades 9-12 every two years. It uses a sampling methodology that provides national and state estimates. Among the data collected by the survey are lifetime and current use of alcohol, tobacco, and illicit drugs—and use of these substances before age 13. The tables on pages 46 and 47 provide estimated percent-

tages of students nationwide and in Missouri for several survey items. The estimates are provided for odd-numbered years from 1995 to 2005. Because sampling is used, the estimated percentage for each item is the midpoint of the probable range—or confidence interval—of the actual population percentage. Many confidence intervals (shown in italics) for two years overlap. The overlap indicates that apparent changes in that population between the years can be due to sampling error rather than actual changes in rates. Similarly, many confidence intervals of the estimates overlap for two populations (e.g. Missouri 10<sup>th</sup> grade versus 12th grade, or Missouri 10<sup>th</sup> grade versus U.S. 10<sup>th</sup> grade), suggesting that their actual rates might not be different. The discussions below are based on the midpoint estimates. Statistically significant rate changes and differences are specially noted.

Alcohol: Based on the YRBS, current (past 30-day) use of alcohol among Missouri's high school students fell from 49.2 percent in 2003 to 40.8 percent in 2005—a statistically significant reduction. Binge drinking (consuming five or more drinks in a row) in the 30 days preceding the survey was reported by 30.5 percent of the students in 2003 but only 24.9 percent in 2005. Students in the 9<sup>th</sup> grade had the largest reductions on both of these measures, with current use decreasing from 44.4 percent in 2003 to 30.4 percent in 2005 and binge drinking decreasing from 25.3 percent to 13.6 percent. The percentage of students reporting that they began drinking before age 13 changed little between 2003 and 2005, but it declined considerably in the last decade from 39.9 percent in 1995 to 24.2 percent in 2005. U.S. high school students had much smaller, non-significant reductions, with an estimated rate of 43.3 percent in 2005 compared to 44.9 percent in 2003. In 2005, Missouri's high school students had lower estimated rates of alcohol use and binge drinking than students nationwide.

Tobacco: According to YRBS results, past 30-day use of any tobacco product by high school students in Missouri has been decreasing. In 1999, an estimated 39.0 percent of Missouri students were current users of cigarettes, cigars, chewing tobacco, snuff, or dip. Tobacco use was 36.2 percent in 2001, 29.7 percent in 2003, and 27.0 percent in 2005—a statistically significant reduction from the 1999 rate. During this same time period, tobacco use among students nationally declined from 40.2 percent in 1999 to 28.4 percent in 2005.

Cigarette Use: Cigarette smoking has similarly declined. In 1997, 40.3 percent of Missouri high school students smoked in the past 30 days. This rate dropped steadily to 32.8 percent in 1999, 30.3 percent in 2001, 24.8 percent in 2003, and 21.3 percent in 2005 to yield an overall significant reduction. Nationwide, past 30-day cigarette use by high school students has declined from 36.4 percent in 1997 to 23.0 percent in 2005. Lifetime cigarette use among Missouri high school students has declined remarkably. In 1995, 75.0 percent reported that they had ever tried cigarette smoking. This rate fell gradually to 63.3 percent in 2003 before dropping significantly to 49.6 percent in 2005. Students in grade 9 had the largest reduction—from 60.8 percent in 2003 to 40.7 percent in 2005. Meanwhile, the U.S. rate for lifetime use declined from 71.3 percent in 1995 to 54.3 percent in 2005. The percentage of Missouri students who reported that they smoked a cigarette before age 13 dropped to 14.8 percent in 2005, compared to 20.2 percent in 2003 and 25.7 percent in 2001. Compared to 2001, the 2005 estimate was statistically lower. The nationwide rate also dropped significantly—from 22.1 percent in 2001 to 16.0 percent in 2005.

Efforts to Quit Smoking: Among Missouri high school students who identified themselves as current smokers, an estimated 57.7 percent tried to quit smoking during the 12 months preceding the 2005 survey. In 2003, 54.6 percent tried to quit. Nationwide in 2005, 54.6 percent indicated that they tried to quit smoking—slightly more than the 53.8 percent who tried to quit in 2003.

Marijuana: Past 30-day (current) use of marijuana among Missouri high school students has been edging downward from its 1997 YRBS rate of 28.2 percent, reaching 18.1 percent in 2005. Nationwide, current use declined from 26.2 percent in 1997 to 20.2 percent in 2005. The estimated percentage of Missouri students who ever used marijuana dropped to 35.0 percent in 2005—the

lowest rate since administration of the YRBS began in the state. Among U.S. high school students in 2005, 38.4 percent had ever used marijuana. Missouri students who used marijuana before age 13 decreased from the YRBS peak rate of 13.6 percent in 1999 to 8.8 percent in 2005, virtually the same as the 2005 U.S. estimate of 8.7 percent.

Cocaine: Estimates of the percentage of Missouri high school students who ever used cocaine have fluctuated during the last decade without any statistically significant changes. The 2005 rate was 7.4 percent compared to a national rate of 7.6 percent. Past-month use of cocaine was reported by 3.0 percent of Missouri high school students and 3.4 percent of students nationwide in 2005. Missouri 9th graders had the lowest rate of use at 1.6 percent compared to a national rate of 3.0 percent for that grade level.

Methamphetamine: The percentage of Missouri high school students who ever used methamphetamine was 6.4 percent in 2005, compared to 6.2 percent among all U.S. high school students. The highest lifetime methamphetamine rates collected by the YRBS were 10.4 percent for Missouri students and 9.8 percent for U.S. students, both in 2001.

Ecstasy: Among Missouri high school students, the estimated percentage that ever used ecstasy (MDMA) declined from 6.7 percent in 2003 to 6.1 percent in 2005. The rates ranged from 3.8 percent for grade 9 to 8.5 percent for grade 12. Lifetime ecstasy use among U.S. high school students dropped sharply during the same time period. The national rate decreased from 11.1 percent in 2003 to 6.3 percent in 2005—a statistically significant reduction.

Inhalants: In 2005, 12.2 percent of Missouri's high school students had ever use inhalants—statistically lower than the 20.0 percent posted in 1995. Lifetime inhalant use rates in Missouri have closely paralleled the national rates, which dropped from 20.3 percent in 1995 to 12.4 percent in 2005.

Non-prescription Steroid Use: In 2003, an estimated 4.5 percent of Missouri high school students had ever used illicit steroids. This figure decreased to 3.5 percent in 2005. Steroid use among U.S. high school students declined significantly. Lifetime use decreased from 6.1 percent in 2003 to 4.0 percent in 2005.

Heroin: Based on analysis of the YRBS, 2.7 percent of Missouri high school students indicated in 2005 that they had ever used heroin. This rate is not statistically larger than the 1.7 percent rate in 2003 due to the size of the confidence intervals. The 2005 estimated rates were higher for students in grades 11 and 12 than in grades 9 and 10. Among high school students nationwide, 2.4 percent were lifetime heroin users and rates were highest for grades 9 and 10.

Injection Drug Use: In 2005, an estimated 2.3 percent of Missouri students in grades 9-12 had ever used a needle to inject an illegal drug, compared to 1.3 percent in 2003. The apparent increase is consistent with the estimated 1.0 percentage point increase in lifetime heroin use during this period. However, the difference in the rates is not statistically significant. Injection drug use among males was 3.1 percent—nearly twice the 1.6 percent estimate for females. Lifetime injection drug use rates in the U.S. dropped from 3.2 percent in 2003 to 2.1 percent in 2005.

### ***Monitoring the Future Survey***

Monitoring The Future (MTF) is a survey funded by the National Institute on Drug Abuse and conducted by the University of Michigan, Institute for Social Research. It is administered each year nationwide to students in grades 8, 10, and 12, college students, and young adults 19-28 years of age. The charts on pages 26-28 illustrate trends for past 30-day use of alcohol, cigarettes, marijuana, and cocaine. The tables on pages 40-44 provide past 30-day and lifetime use of all drugs included in the survey. Although state subsets of the MTF results are not available, rates from the Missouri Student Survey for grades 8, 10, and 12 are compared to the MTF national estimates in the next section.