

A NEW ANALYSIS:  
Recent Trends, Risk Factors and Consequences

# GIRLS - AND - DRUGS

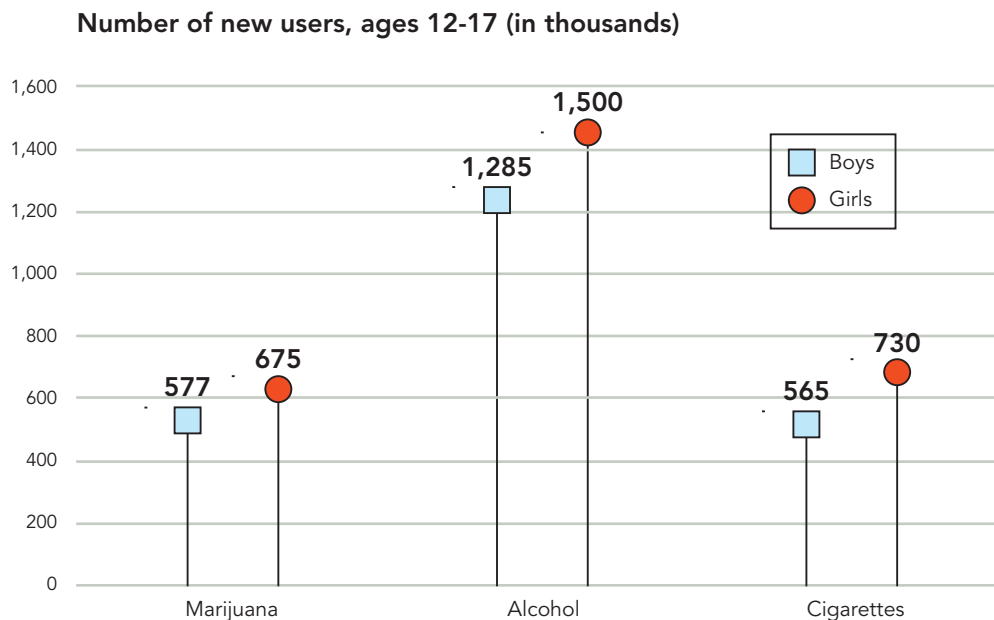
OFFICE OF NATIONAL DRUG CONTROL POLICY  
EXECUTIVE OFFICE OF THE PRESIDENT

February 9, 2006

## GIRLS BY THE NUMBERS

- In 2004, more girls than boys started using alcohol, cigarettes and marijuana:
  - 1,500,000 girls started using alcohol
  - 730,000 girls started smoking
  - 675,000 started using marijuana
- Since 2002, more girls than boys started using marijuana.
- 1,600,000 girls reported having at least one major depressive episode in 2004. That's more than twice as many as boys.
- Teen girls outnumber boys in their misuse of prescription drugs.

Figure 1  
**More adolescent girls than boys started using marijuana, alcohol and cigarettes in 2004**



Source: SAMHSA, 2004 National Survey on Drug Use and Health (September 2005)

## GIRLS AND DRUGS

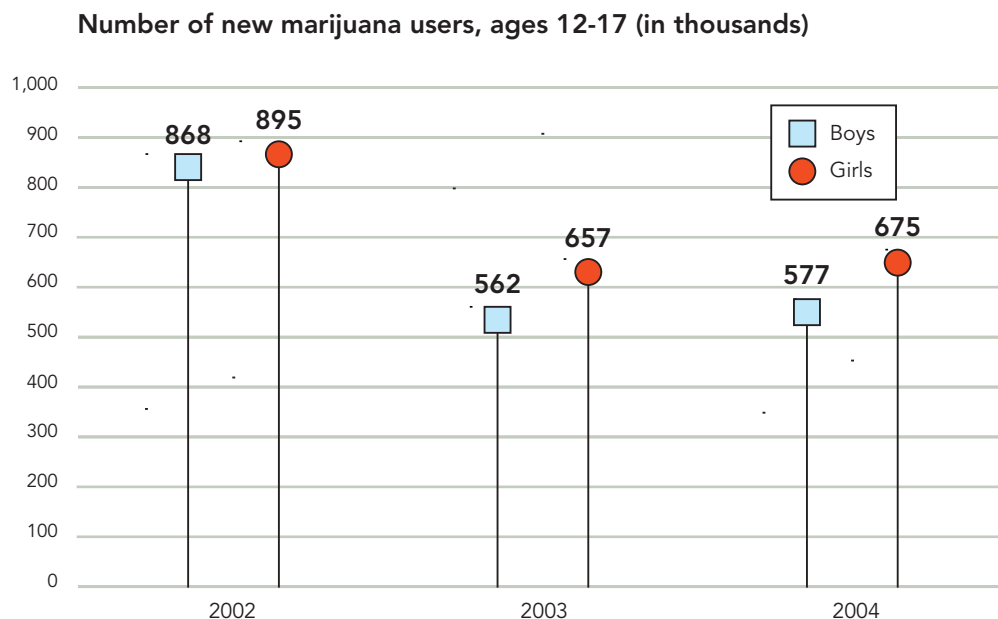
A growing body of evidence documents the motivations and consequences of adolescent girls' drug use. A number of findings have shown that adolescent females display unique vulnerabilities that can lead to substance use. Furthermore, research reveals that drug abuse has a more profound impact on teen girls, both physically and psychologically. These studies can help us better understand the vulnerabilities, consequences, and factors that affect the risks of girls' substance abuse.

### Substance Abuse Prevalence Rates Among Adolescent Girls

The latest findings on drug use in the United States from the National Survey on Drug Use and Health (NSDUH) show that marijuana is the illicit drug most widely used by girls. And research trends indicate that girls are catching up with boys with regard to illicit drug and alcohol use. In some cases, such as cigarette smoking, girls' usage rates have surpassed those of boys.

- More teenage girls use marijuana than cocaine, heroin, Ecstasy, and all other illicit drugs combined. (2004 NSDUH)
- Girls are closing the gap with boys in terms of usage of marijuana, alcohol and cigarettes. Since 2002, more teenage girls than boys started using marijuana. And in 2004, more girls than boys started using alcohol and cigarettes. (2002, 2003 and 2004 NSDUH)
  - In 2002, 895,000 teenage girls started using marijuana
  - In 2003, 657,000 teenage girls started using marijuana
  - In 2004, 675,000 teenage girls started using marijuana
  - In 2004, 1,500,000 teenage girls started using alcohol
  - In 2004, 730,000 teenage girls started smoking cigarettes

Figure 2  
**More adolescent girls than boys started using marijuana in 2002, 2003 and 2004**

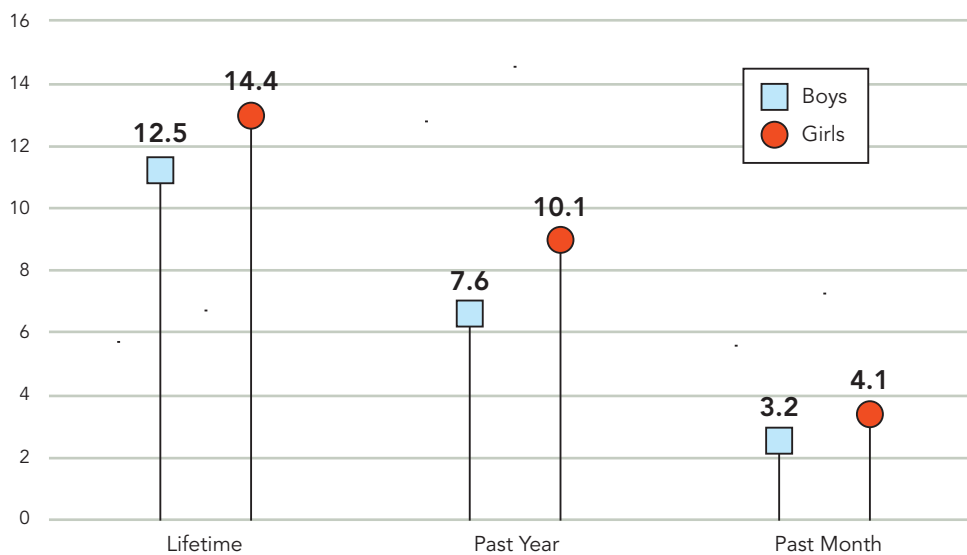


Source: SAMHSA, 2002, 2003 and 2004 National Survey on Drug Use and Health (September 2005 and October 2004)

- Teen girls surpass boys in their misuse of prescription drugs. (2004 NSDUH)
- One out of eight teenage girls reported smoking cigarettes in the past month (12.5% compared to 11.3% for boys). (2004 NSDUH)
- 18 percent of teenage girls reported drinking alcohol in the past month compared to 17.2 percent of teenage boys. (2004 NSDUH)

Figure 3  
**Adolescent girls surpass boys in misuse of prescription drugs**

Percent reporting misuse of prescription drugs, ages 12-17



Source: SAMHSA, 2004 National Survey on Drug Use and Health (September 2005)

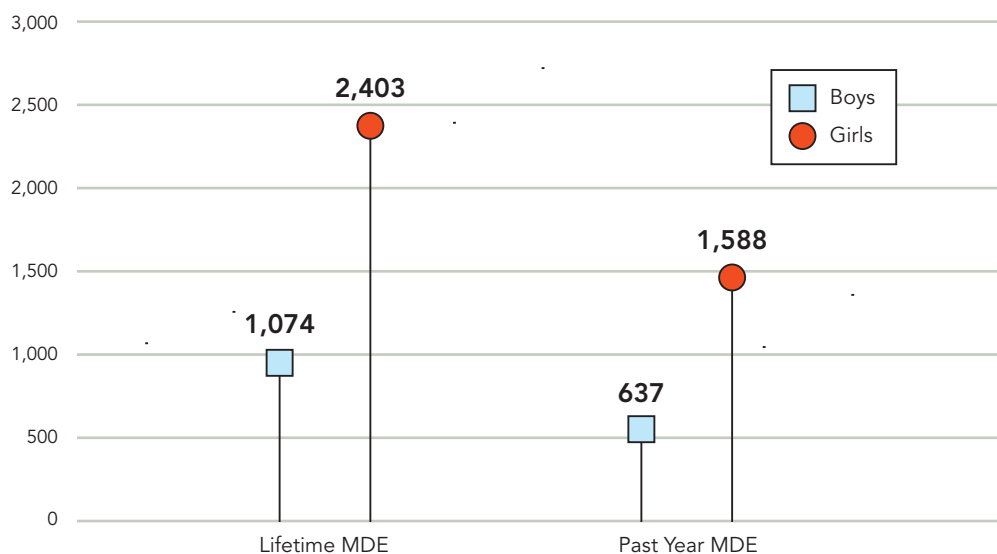
### Adolescent Girls' Unique Vulnerabilities for Drug Use

Teenage girls are vulnerable to a number of unique physical, psychological and social risk factors for drug and alcohol abuse, according to recent studies.

- Depression, anxiety, excessive concerns about weight and appearance, risky sexual behavior, early puberty, psychiatric or conduct disorders, and physical or sexual abuse are key risk factors for substance abuse that girls and young women are affected by. (CASA, 2003)
- More than twice as many young females as males reported depression in 2004. (2004 NSDUH)
- Stress has been identified as a leading reason for drinking, smoking, and using drugs among girls. (The Commonwealth Fund, 1997)
- Friends have a substantial influence on teens overall, but girls are especially susceptible to peer pressure when it comes to drinking. Adolescent girls are more likely than boys to drink to fit in with their friends, while boys drink largely for other reasons and then join a group that also drinks. (Donovan, 1996)

## Figure 4 More than twice as many adolescent girls as boys reported depression in 2004

Number with at least one major depressive episode (MDE), ages 12-17 (in thousands)



Source: SAMHSA, 2004 National Survey on Drug Use and Health (September 2005)

### Impaired Judgment and Drug Use

Marijuana and alcohol use can impair judgment and lead to serious consequences. Recent studies show that teenage girls who abuse drugs and alcohol are more likely to have sex.

- In 2003, approximately one out of four (23.9%) sexually active ninth-grade girls had used alcohol or drugs during their last sexual intercourse. (YRBSS, 2003)
- Nearly one quarter of sexually active teens and young adults say they have had unprotected sex because they were using alcohol or drugs at the time. (Kaiser Family Foundation, 2002)
- Twelve percent of sexually active teens ages 15 to 17 and 25 percent of sexually active youths ages 18 to 24 reported having had unprotected sex while they were using alcohol or drugs. (Kaiser Family Foundation, 2002)
- Alcohol or drug use can place young people at higher risk for contracting an STD, as those whose use alcohol and drugs are more likely to have sex with multiple partners. (Kaiser Family Foundation, 2002)
- Substance abuse may also be related to higher rates of unintended pregnancy because drug and alcohol use is associated with decreased condom use and increased casual sexual activity during which contraceptives of any kind are less likely to be used. (Kaiser Family Foundation, 2002)
- Many girls lose their virginity while drunk. Many of those become pregnant, or do things they wouldn't do when sober. In one study of unplanned pregnancies in 14-21 year olds, one third of the girls who had gotten pregnant had been drinking when they had sex; 91 percent of them reported that the sex was unplanned. (Flanigan, et al., 1990)

### Low Self-Esteem and Drug Use

Studies show that girls' issues with self-esteem and body image can lead to substance abuse.

- Research shows that many girls experience a dramatic transition during early adolescence marked by a decline in their self-esteem and self-confidence. (Pipher, 1994)
- One study found that girls who at age 12 were low in self-esteem were nearly two and a half times likelier to engage in heavy alcohol use at age 15 than those higher in self-esteem. (Kumpulainen & Roine, 2002).
- Young females tend to use alcohol or drugs to improve mood, increase confidence, reduce tension, cope with problems, lose inhibitions, enhance sex or lose weight. (CASA, 2003)
- Research has found that girls who are vulnerable to low self-worth may have more trouble coping with the stressors of adolescence. (McCauley, Pavlidis & Kendall, 1999)
- Diet pill use among girls has tended to run from two and a half times to four times as high as among boys. (2005 MTF)

### Consequences of Drug Use

Adolescent girls are susceptible to the physical, mental, and sometimes social consequences of substance abuse, especially at a critical time in life when their bodies and brains are still developing.

- Some research shows that marijuana use can precede symptoms of depression. Girls (ages 14–15) who used marijuana daily were five times more likely to face depression at age 21. Daily use in young women was associated with an over fivefold increase in the odds of reporting a state of depression and anxiety. (Patton, et al., 2002)
- Girls are more vulnerable to the health consequences of substance use, such as developing symptoms of nicotine addiction faster than boys. (DiFranza, et al., 2002)
- Adolescent girls who consume even moderate amounts of alcohol may experience disrupted growth and puberty. (National Institute on Alcohol Abuse and Alcoholism, 2004)
- A recent study concluded that engaging in sex and using drugs places adolescents, and especially girls, at risk for future depression. (Hallfors, et al, 2005)
- It is estimated that teenage girls who binge drink are up to 63 percent more likely to become teen mothers. (Dee, 2001)

### Parents' Positive Influence

Research shows that parents are the most important influence in their daughters' decisions about drug use.

- Parental trust is a powerful deterrent to risky behavior among female adolescents. (Borawski, Levers-Landis, Lovegreen & Trapl, 2003)
- Parental disapproval of drug use plays a strong role in turning back drug use. Youth who felt their parents did not strongly disapprove of marijuana use were about six times as likely to use marijuana as youth who felt their parents would disapprove. (2004 NSDUH)
- Girls appear to be more sensitive to conflict and related issues in the family. When parenting quality declines, or when an adolescent girl is exposed to high levels of negative emotion from parents or other family members, her developing capacities for coping and self-regulation may be overwhelmed by life stressors or challenges. (Call & Mortimer, 2001)

# Annotated Reference List

The following are abstracts of the research cited above:

## **Substance Abuse Prevalence Rates Among Adolescent Girls**

**The National Survey on Drug Use and Health (NSDUH) 2002, 2003 and 2004. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.**

This survey provides yearly national and state level estimates of alcohol, tobacco, illicit drug, and non-medical prescription drug use among youth and adults. Other health-related questions also appear from year to year, including questions about mental health.

## **Monitoring the Future (MTF), National Institute on Drug Abuse (NIDA), 2002 to 2005.**

Monitoring the Future is an ongoing, 30-year study of the behaviors, attitudes, and values of American middle school, secondary school, and college students and young adults. Each year, a total of approximately 50,000 8th, 10th and 12th grade students are surveyed.

## **Adolescent Girls' Unique Vulnerabilities for Drug Use**

**National Center on Addiction and Substance Abuse. Formative years: Pathways to substance abuse among girls and young women ages 8-22. Columbia University, New York, NY, 2003.**

This extensive three-year study sought to identify characteristics of girls and young women who abuse substances and determine when they are at highest risk of doing so. It assessed the impact of such use, including the likelihood of addiction, on girls. The study found that girls use substances for reasons different than boys, that the signals and situations of higher risk are different, and that girls are more vulnerable to abuse and addiction; they get hooked faster and suffer the consequences sooner than boys.

## **The Commonwealth Fund survey of the health of adolescent girls, New York. The Commonwealth Fund, 1997.**

The Commonwealth Fund's Commission on Women's Health initiated this study to explore the current state of girls' health and the unique challenges they face. The study included a survey of 6,748 male and female students in grades 5 through 12 on a variety of topics, such as sexual or physical abuse and violence, mental health, risky behaviors, health care access and communication with providers. The study found disturbingly high rates of reported abuse, depressive symptoms and behaviors that can put girls' health at risk and have potential lifelong consequences. The study also indicated that the adolescent years are a far more negative time for girls' health than for that of boys. It concluded that puberty tends to bring a higher incidence of depression among teenage girls, which can trigger alcohol use. One in four girls exhibited depressive symptoms—a rate 50 percent higher than for boys. Teen girls were also less likely than boys to be highly self-confident. The study also identified stress as a leading reason for drinking, smoking and using drugs among girls.

**Donovan, J.E. Gender differences in alcohol involvement in children and adolescents: a review of the literature. In Women and alcohol: Issues for prevention research, National Institute on Alcohol Abuse and Alcoholism, Research Monograph No. 32, Bethesda, MD, 1996.**

This study concluded that friends have a substantial influence on teens overall, but that girls are especially susceptible to peer pressure when it comes to drinking. It found that adolescent girls are more likely than boys to drink to fit in with their friends, while boys drink largely for other reasons and then join a group that also drinks. This NIAAA research monograph reviewed and analyzed studies conducted by alcohol researchers as well as investigators who conducted research germane in this area.

### **Impaired Judgment and Drug Use**

**Youth Risk Behavior Surveillance System, 2003. Centers for Disease Control and Prevention. 2004. MMWR: CDC Surveillance Summaries 53 (No. SS-2): 75.**

The Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of priority health-risk behaviors among youth and young adults—behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection; unhealthy dietary behaviors; and physical inactivity and excessive weight. YRBSS includes a national school-based survey conducted by CDC as well as state and local school-based surveys conducted by education and health agencies. This report summarizes results from the national survey, 32 state surveys, and 18 local surveys conducted among students in grades 9–12 during February–December 2003.

**Substance Use and Risky Sexual Behavior: Attitudes and Practices Among Adolescents and Young Adults, February 2002, Kaiser Family Foundation.**

This survey was conducted by the Kaiser Family Foundation between November 2001 and January 2002. It includes responses from 988 youths ages 15 to 24 on the topics of sexual activity and alcohol and drug use. The study findings underscore the need for health programs, parents and schools to inform teens about the dangers of mixing alcohol, drugs and sexual activity.

**Flanigan, B., Mclean, A., Hall, C., & Propp, V. (1990). Alcohol use as a situational influence on young women's pregnancy risk-taking behaviors. Adolescence, 25: 205-214. University of Wisconsin-Madison, School of Social Work 53706.**

Recent studies have found that many young women just beginning their sexual lives use alcohol prior to intercourse. A large number appear to drink heavily enough prior to sex to compromise their ability to use contraceptives. The question emerges whether there is a relationship between drinking before intercourse, the nonuse of birth control methods, and unplanned pregnancies. The present research describes 43 instances of intercourse which resulted in unplanned pregnancies in 14- to 21-year-olds. Variables examined included alcohol use prior to sex, amount of alcohol consumed, the use of other drugs, the planning of intercourse, respondents' stated reasons for nonuse of contraceptives, and other general demographic data.



## Low Self-Esteem and Drug Use

**Pipher, M. *Reviving Ophelia: Saving the selves of adolescent girls*. New York, NY: Random House, 1994.**

Mary Pipher, a clinical psychologist from Lincoln, Nebraska, wrote this book as a comment on and a response to the unique mental and physical pressures, troubles and health concerns of adolescent girls. In describing a series of case studies, Pipher concludes that adolescence is an especially difficult time for girls and that many girls experience a dramatic transition during early adolescence marked by a decline in their self-esteem and self-confidence. This book offers solutions for these issues; for example, parents take an interest in their daughters' life by taking time to understand the pressures that she faces during the school day.

**Kumpulainen, K. & Roine, S. (2002). *Depressive symptoms at the age of 12 years and future heavy alcohol use*. *Addictive Behaviors*, 27(3), 425-436.**

The Children's Depression Inventory (CDI), with added questions concerning psychosomatic symptoms and bullying, was used to reveal psychiatric symptoms among children at the age of 12 years. The study concluded that disordered mood at the age of 12 years was not related to heavy alcohol use at the age of 15 years. Perceiving oneself as failing to perform well at school and low self-esteem at the age of 12 years were related to heavy use of alcohol 3 years later among girls, as were interpersonal problems with aggressive tendencies among boys.

**McCauley, E., Pavlidis, K. & Kendall, K. *The depressed child and adolescent: Developmental and clinical perspectives*. Cambridge University Press, Cambridge, England, 1999.**

This book, written by an international, interdisciplinary team of mental health experts, draws together the latest findings in the psychopathology of depression in youth. Combining theory and practice, the authors highlight the developmental influences and effects of depression. The book explores key issues, including the importance of life events in the onset and continuation of depression; how depressed adolescents progress into adult life; and how depression arises and the effects it may have on brain and behavior during the teen years. The book finds that girls who are vulnerable to low self-worth may have more trouble coping with the stressors of adolescence.

## Consequences of Drug Use

**DiFranza, J.R., Savageau, J.A., Rigotti, N.A., Fletcher, K., Ockene, J.K., McNeill, A.D., et al. *Development of symptoms of tobacco dependence in youths: 30-month follow-up data from the DANDY study*. *Tobacco Control*, 11 (3), 228-235, 2002.**

This longitudinal study of the natural history of tobacco dependence found that symptoms of tobacco dependence commonly develop rapidly after the onset of intermittent smoking. While individuals differ widely, girls tend to develop symptoms of tobacco dependence faster than boys.

**National Institute on Alcohol Abuse and Alcoholism (NIAAA). *Alcohol Alert No. 62, Alcohol-an Important Women's Health Issue*, July, 2004.**

This alert builds on a variety of studies to explain the unique and negative health effects alcohol has on the female body. It concludes that although men tend to drink more alcohol than women, women are more at risk for developing problems from alcohol intake.

**Hallfors, D. et al. Which Comes First in Adolescence—Sex and Drugs or Depression? *American Journal of Preventive Medicine*, 29 (3): 163–170, 2005.**

This study concluded that engaging in sex and drug behaviors places adolescents, and especially girls, at risk for future depression. The report examined data from the National Longitudinal Study of Adolescent Health and studied a sample of 13,491 youth, grades 7 to 11, interviewed in 1995 and again one year later. While only high-risk behavior among boys increased the odds of later depression, both high-risk and experimental behavior patterns in girls predicted depression.

**Dee, T.S. The effects of minimum legal drinking ages on teen childbearing. *The Journal of Human Resources*, 36(4), 824–838, 2001.**

This study provides empirical evidence on the structural relationship between alcohol use and teen childbearing by exploiting the exogenous variation in youth alcohol availability generated by changes in state minimum legal drinking ages. The reduced-form childbearing models are based on state-level panel data and two-way fixed effect specifications as well as models that incorporate as controls the contemporaneous childbearing data from older women who were unaffected by the state changes in youth alcohol policy. The results indicate that alcohol availability and use have large, independent, and statistically significant effects on childbearing among black teens but not necessarily among white teens.

**Patton, G.C. et al. Cannabis use and mental health in young people: cohort study. *British Medical Journal*, 325:1195–1198, 2002.**

In this study, daily use of marijuana among girls increased the risk of depression five times. Weekly or more frequent marijuana use in teenagers doubled the risk of depression and anxiety.

**Youth Risk Behavior Surveillance System, 2003. Centers for Disease Control and Prevention. 2004. *MMWR: CDC Surveillance Summaries* 53 (No. SS-2): 1–96.**

The Youth Risk Behavior Surveillance System (YRBSS) monitors six categories of priority health-risk behaviors among youth and young adults—behaviors that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) infection; unhealthy dietary behaviors; and physical inactivity and excessive weight. YRBSS includes a national school-based survey conducted by CDC as well as state and local school-based surveys conducted by education and health agencies. This report summarizes results from the national survey, 32 state surveys, and 18 local surveys conducted among students in grades 9–12 during February–December 2003.

## **Parents' Positive Influence**

**Borawski, E., Levers-Landis, C., Lovegreen, L. & Trapl, E. Parental monitoring: Negotiated unsupervised time and parental trust: the role of perceived parenting practices in adolescent health risk behaviors. *Journal of Adolescent Health*, (33): 60-70, 2003.**

In this study, perceived parental trust served as a protective factor against sexual activity, tobacco and marijuana use in females. This study called attention to the importance of established trust between an adolescent girl and her parents as a strong deterrent for risky behaviors.

**Call, K.T. & Mortimer, J.T. *Arenas of comfort in adolescence: A study of adjustment in context*. Manwah, NJ: Lawrence Erlbaum, 2001.**

This book used data from 1,000 adolescents to address key questions about the experience of comfort and stability in the teen years and its effect on behaviors and mental health. The results of this research indicated girls appear to be more sensitive to conflict and related issues in the family and that making their environment more supportive and comfortable will be reflected in improved mental health and achievement. By providing social support, an “arena of comfort” strengthens the young person and helps her better deal with life challenges.