Center for Health Statistics

New Jersey Behavioral Risk Factor Surveillance System: Summary Report 1991 - 1994

# Substance Abuse Among New Jersey Adults

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Substance abuse is a leading cause of morbidity and mortality throughout the United States. Nationally, it has been estimated that approximately 20% of all deaths are tobacco-related, 5% are alcohol-related, and fewer than 1% are related to the abuse of illicit substances[1]. However, in New Jersey, it is likely that the percentage of deaths attributable to the abuse of illicit drugs is higher than elsewhere in the country, because of the substantial number of AIDS cases which have been connected to intravenous drug abuse (currently, more than 1,500 new cases a year[2]). The New Jersey Behavioral Risk Factor Surveillance System (BRFSS) does not address the use of illicit substances, but provides an opportunity to estimate directly the prevalence of both tobacco and alcohol abuse among adults in New Jersey. (Other sources of information on substance use among New Jersey adults include the United States Census Bureau's Current Population Survey[3] and the New Jersey Department of Health and Senior Service's 1993 Substance Abuse Treatment Needs Assessment Survey[4].)

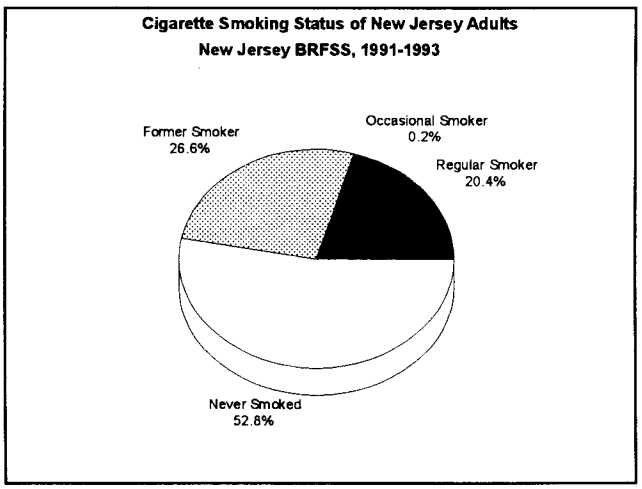
NOTE: The New Jersey Behavioral Risk Factor Surveillance System is part of the national Behavioral Risk Factor Surveillance System, a telephone survey of adults aged 18 years and over. This survey is designed to monitor modifiable risk factors for chronic diseases and other leading causes of death. The survey is a cooperative effort between the national Centers for Disease Control and Prevention (CDC) and all states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. It has been in existence since 1984. The New Jersey Department of Health and Senior Services has been participating in the survey on a monthly basis since 1991, conducting approximately 125 interviews per month. Estimates of alcohol and tobacco use from the BRFSS have been shown to compare favorably with similar data from in-person interviews[5,6].

## Tobacco

Tobacco smoking has been identified as a risk factor for cardiovascular disease, cancer, non-malignant lung disease, low birth weight, intrauterine growth retardation, and burn-related injuries, among other health problems, in both smokers and non-smokers. The use of smokeless tobacco is also a risk factor for disease, including oropharyngeal cancer and tooth decay. Estimates derived using the CDC's SAMMEC computer software suggest that tobacco use leads to about 30,000 years of potential life lost before age 65 and 2 billion dollars in direct and indirect economic costs annually in New Jersey[7].

Currently, about one-fifth of New Jersey's adult population are cigarette smokers and slightly more than one-fourth are former smokers (defined as having smoked at least 100 cigarettes some time in the past) (Figure 1). The estimated proportion of adults in New Jersey who were "regular" cigarette smokers during 1991-1993 according to the BRFSS was 20.3% (19.0%-21.7%)*. This value is only slightly lower than the median value of 22.2% reported for all participating states in 1992[8]. An additional 2.0% of the adult population use some other tobacco product (cigar, pipe, or smokeless tobacco), based on the analysis of a supplemental set of questions which was added to the 1993 LAB (regional) BRFSS survey. Of these non-cigarette smokers, approximately two-thirds (57.9%-78.1%) were estimated to be cigar and pipe smokers, and approximately one-third (21.9%-42.1%) were estimated to be users of smokeless tobacco alone.

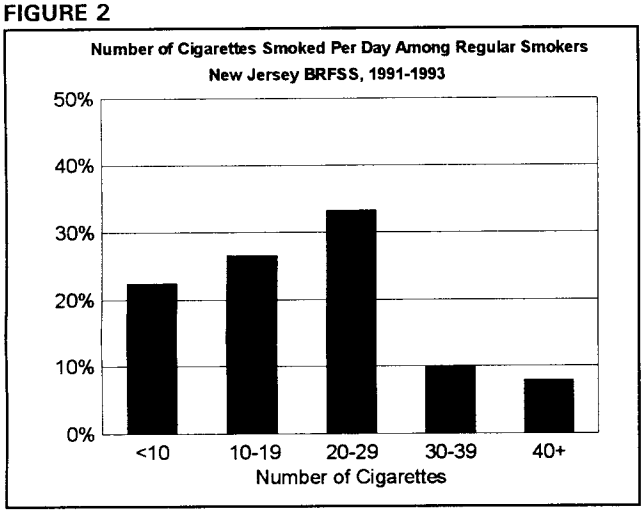
**FIGURE 1**




Among all self-identified "regular" cigarette smokers in 1991-1993, the median number of cigarettes smoked per day was estimated to be 18.8 (18.4-19.2), with approximately 17.5% (14.8%-20.2%) of adult cigarette smokers smoking 30 or more cigarettes per day (Figure 2). Only a small percentage of current smokers volunteered the information that they were not "regular" smokers (in response to a question about the average number of cigarettes smoked per day). However, responses to an explicit question about smoking frequency during the past thirty days, added to the BRFSS questionnaire in 1994,

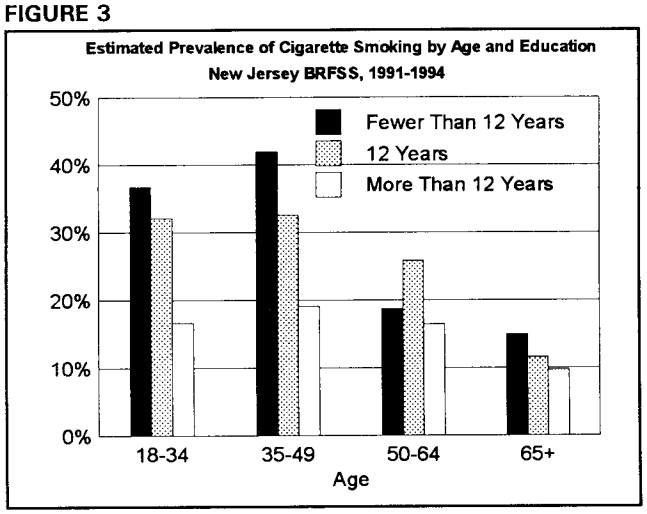
suggest that approximately one-seventh (10.4%-19.4%) of all current smokers do not smoke daily. Among these individuals, the median number of cigarettes smoked per day (on smoking days) was estimated to be 5.5 (3.9-8.4).

**FIGURE 2**



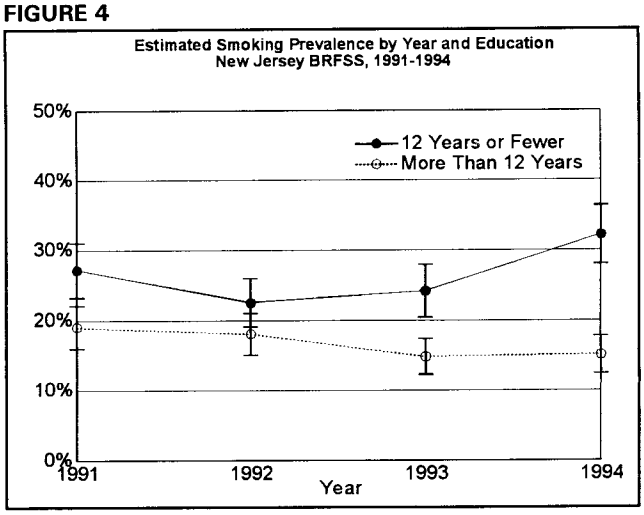

The prevalence of cigarette smoking varies by age and education (Figure 3), with an estimated 16.7% (15.4%-18.1%) overall prevalence of regular smoking among adults with more than 12 years of education, and an estimated 26.5% (24.5%-28.4%) overall prevalence of regular smoking among adults with 12 years of education or fewer. Multivariable analyses suggest that a number of other sociodemographic factors are also associated with smoking, independent of age and education level. For example, self-reported smoking prevalence was higher among respondents

**FIGURE 3**



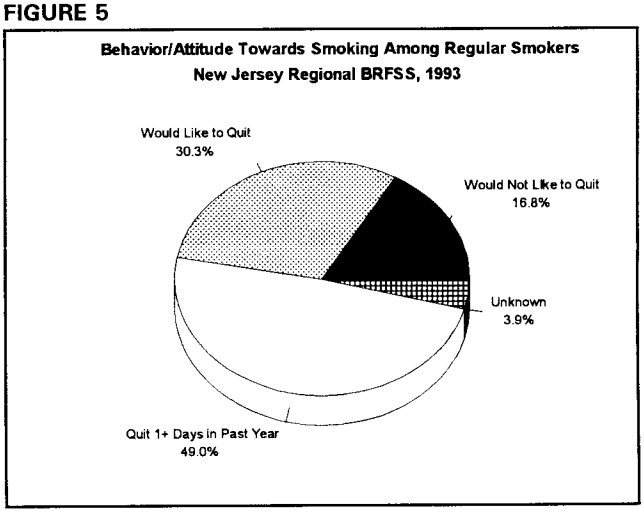

classified as "White, non-Hispanic" compared with other respondents. Also, smoking prevalence was reportedly elevated among those who were divorced or separated, and among those who had no health insurance. There is a suggestion from the New Jersey BRFSS that smoking prevalence increased in 1994, the last year for which data are available, among adults with lower levels of education (Figure 4).

**FIGURE 4**




The chronic use of tobacco may be involuntary to the extent that the nicotine which is present in all tobacco products has profound addictive properties[9]. Therefore, it is important to note that approximately half (45.8%-52.2%) of adult current cigarette smokers in New Jersey had reportedly quit smoking one or more days in the past year. An additional 30% (27.3%-33.2%) would like to quit but had not tried, based on responses to a question added to the special 1993 regional survey (Figure 5).

**FIGURE 5**



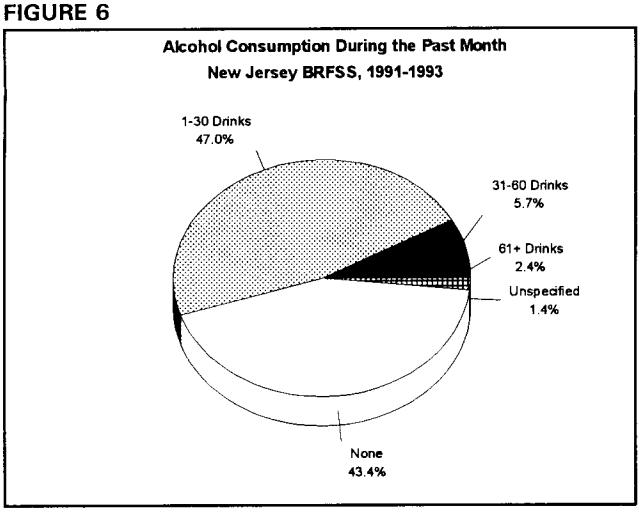

## Alcohol

Excessive alcohol intake has been identified as a risk factor for cirrhosis and other non-malignant digestive diseases, psychological and cognitive disorders, injuries, birth defects, and several forms of cancer, among other

health problems. Conversely, moderate alcohol intake has been associated with a decrease in overall mortality[10].

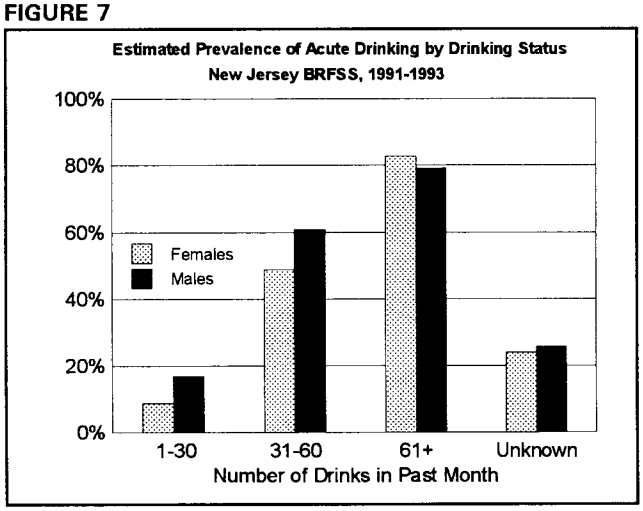
An estimated 56.5% (54.9%-58.2%) of New Jersey adults, on average, during 1991-1993, had one or more alcoholic drinks during the previous month according to the BRFSS (Figure 6). This figure is somewhat higher than the median value reported for all participating states (50.5%) in 1992[8]. However, the estimated proportion of adults having an average of two or more drinks per day during the past month (3.1%) in New Jersey during 1991-1993 is comparable to the figure of 2.9% reported as the median for all participating states in 1992[8].

**FIGURE 6**




The proportion of New Jersey adults who engaged in one or more acute drinking episodes (consisting of 5 or more alcoholic drinks at one sitting) during the previous month was estimated to be 11.6% (10.5%-12.7%), on average, during 1991-1993. This figure is slightly lower than that of 14.3% reported as the median for all participating states in 1992[8]. Among drinkers, the prevalence of acute drinking was estimated to be 20.8% (18.9%-22.7%) and was strongly associated with total intake (Figure 7). However, about half (46.4%-56.5%) of the prevalence of acute drinking was accounted for by persons who averaged one drink per day or fewer during the previous month.

**FIGURE 7**




The estimated prevalence of acute drinking among New Jersey adults declines consistently with age, with males accounting for more than two-thirds of acute drinkers in all age groups. Multivariable analyses suggest that acute drinking patterns are also more prevalent among New Jersey adults who are not married, independent of age and gender. There is no consistent association between the prevalence of acute drinking and education level, however (Figure 8). There is a suggestion from the New Jersey BRFSS of an increase in the prevalence of acute drinking among males during 1991-1993, the last period for which data are available (Figure 9).

**FIGURE 8**

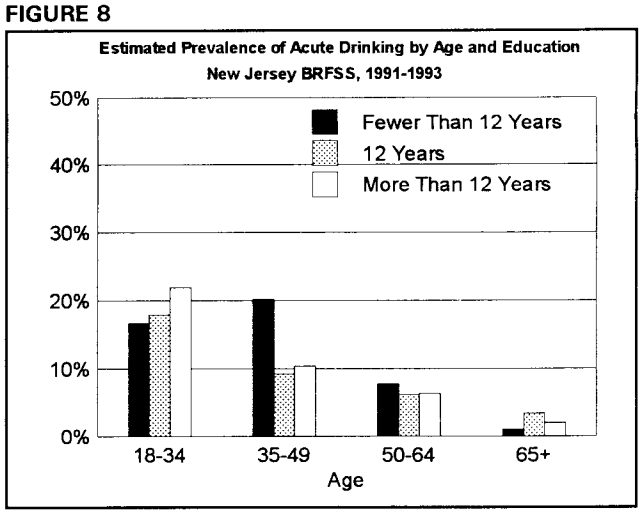
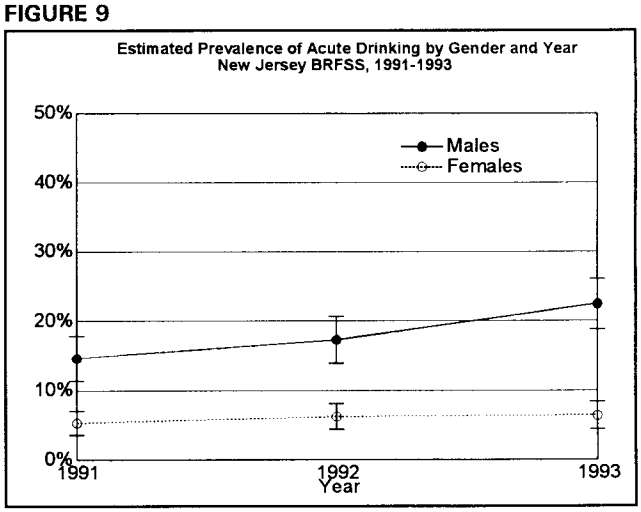



**FIGURE 9**




*Numbers in parentheses represent approximate 95% confidence intervals for the underlying population-based

statistics, taking into account the random error introduced by sampling. These confidence intervals were calculated from variance estimates generated by the statistical software package SUDAAN, used for surveys such as the BRFSS which incorporate complex sampling designs[11].

References:


1. McGinnis JM, Foege WH. Actual causes of death in the United States. JAMA 270:2207-2212. 1993.
2. Division of AIDS Prevention and Control. New Jersey HIV/AIDS cases reported as of December 31, 1995. Trenton, NJ: New Jersey Department of Health. 1996.
3. Nelson DE, Kirkendall RS, Lawton RL, et al. Surveillance for smoking-attributable mortality and years of potential life lost, by state -- United States, 1990. MMWR 43(SS-1);1-8. 1994.
4. Division of Addiction Services, with the Center for Public Interest Polling, Eagleton Institute of Politics, Rutgers University. 1993 Substance Abuse Treatment Needs Assessment Survey of Households in New Jersey. Volume 1: Main Findings. Trenton, NJ: New Jersey Department of Health. 1996.
5. Gentry EM, Kalsbeek WD, Hogelin GC, et al. The behavioral risk factor surveys. Part II. Design, methods, and estimates from combined state data. Am J Prev Med 1:9-14. 1985.
6. Siegel PZ, Frazier EL, Mariolis P, et al. Behavioral risk factor surveillance, 1991: Monitoring progress toward the nation's year 2000 health objectives. MMWR CDC Surveillance Summaries 42:1-21. 1993.
7. Center for Health Statistics. Smoking-attributable morbidity, mortality, and economic costs, New Jersey, 1991 (unpublished data).
8. Centers for Disease Control and Prevention. 1992 BRFSS Summary Prevalence Report. Atlanta, GA: Public Health Service. 1993.
9. U.S. Department of Health and Human Services. The health consequences of smoking - nicotine addiction: A report of the Surgeon General. Rockville, MD: Public Health Service, Centers for Disease Control, Center for Health Promotion and Disease Prevention, Office on Smoking and Health. 1988.
10. Klatsky AL, Friedman GD. Annotation: Alcohol and longevity. Am J Pub Health 85:16-18. 1995.
11. Shah BV, Barnwell BG, Bieler GS. SUDAAN user's manual: Software for analysis of correlated data, Release 6.40. Research Triangle Park, NC: Research Triangle Institute. 1995.



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