

Substance Abuse in Brief

April 2003, Volume 2 Issue 1

What You Should Know About Alcohol Problems

Alcohol use is legal for persons age 21 and older, and the majority of people who drink do so without incident. However, there is a continuum of potential problems associated with alcohol consumption. Alcohol is the most used intoxicating substance in the United States—82 percent of people age 12 and older have used alcohol at least once in their lifetimes. And nearly half of all Americans age 12 and older—an estimated 109 million people—have used alcohol in the past month (Substance Abuse and Mental Health Services Administration 2002).

How Do We Define “Alcohol Problem”?

The term alcohol problem refers to any problem related to alcohol use that may require some type of intervention or treatment. Alcohol problems vary in duration (that is, they are acute, intermittent, or chronic) and severity (that is, ranging from mild to severe). People who drink may, on occasion, consume alcohol at levels that pose a risk for alcohol-related problems. Such risky drinkers typically experience mild or moderate intermittent alcohol problems. More severe chronic problems may be experienced by persons clinically diagnosed with alcohol abuse or alcohol dependence (Institute of Medicine 1990). Some characteristics that may affect a client’s development of alcohol problems or treatment of these problems include his or her age, cultural background, and mental or physical health, including disabilities.

Risky Drinking

A significant proportion of problems related to alcohol use occur in persons who are not alcohol dependent but who engage in risky drinking (Institute of Medicine 1990; National Institute on Alcohol Abuse and Alcoholism 2000). Although risky drinking is not a clinically defined condition with quantifiable symptoms, it is typically defined as consuming alcohol in a way that may pose a risk of physical or emotional harm to the drinker or others but has not produced effects that would result in a diagnosis of alcohol abuse or dependence problems (Babor and Higgins-Biddle 2000). Risky drinking includes heavy or excessive drinking, such as binge drinking (drinking four or more drinks on a single occasion for females and five or more drinks for males) (National Institute on Alcohol Abuse and Alcoholism 2000). It also includes drinking in situations that increase the risk of harm, such as before or while driving, while pregnant, or while taking certain prescription medications (e.g., certain sedatives) (Fiellin et al. 2000). Identifying risky drinking behavior may lead to the early detection and prevention of the more serious problems of alcohol abuse and dependence.

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Alcohol Abuse

A person who frequently engages in risky drinking may have a more severe alcohol problem—alcohol abuse. A recognized medical condition, alcohol abuse is the regular use of alcohol despite recurrent adverse consequences. A diagnosis of alcohol abuse is made when someone exhibits one or more of the following within a 12-month period:

- Recurrent alcohol use resulting in a failure to fulfill obligations at work, school, or home
- Recurrent alcohol use in situations in which it is physically hazardous (e.g., driving an automobile when impaired by alcohol use)
- Recurrent alcohol-related legal problems
- Continued alcohol use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by alcohol use (American Psychiatric Association 1994).



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Alcohol abuse, although problematic, usually does not progress to dependence. In fact, a recent study found that 5 years after being diagnosed with alcohol abuse, only 3.5 percent of abusers met the criteria for alcohol dependence (Schuckit et al. 2001).

Alcohol Dependence

The most severe problem is alcohol dependence, also referred to as alcoholism or alcohol addiction. In 2001 an estimated 5.4 million people age 12 and older were dependent on alcohol (Substance Abuse and Mental Health Services Administration 2002). Alcohol dependence is a chronic disease with discrete definable symptoms. An individual has become alcohol dependent when he or she experiences three or more of the following in a 12-month period:

- Tolerance: the need for increasing amounts of alcohol to reach intoxication.
- Withdrawal: the occurrence of physical symptoms when heavy alcohol use is reduced or stopped. Its symptoms may include tremors, sweating, a high pulse rate, nausea or vomiting, insomnia, and anxiety. Severe withdrawal may induce transient hallucinations or grand mal seizures.
- Drinking larger amounts or drinking over a longer period than was intended.
- A persistent desire or unsuccessful efforts to cut down on or control alcohol use.
- Spending a great deal of time obtaining, using, or recovering from the effects of alcohol use.
- Giving up or reducing social, occupational, or recreational activities because of alcohol use.
- Using despite having knowledge of persistent or recurring physical or psychological problems that were caused or exacerbated by alcohol use (American Psychiatric Association 1994).

Alcohol dependence is a persistent condition. Approximately two-thirds of persons who are alcohol dependent will still be dependent in 5 years (Schuckit et al. 2001).

Factors That May Contribute to Alcohol Dependence

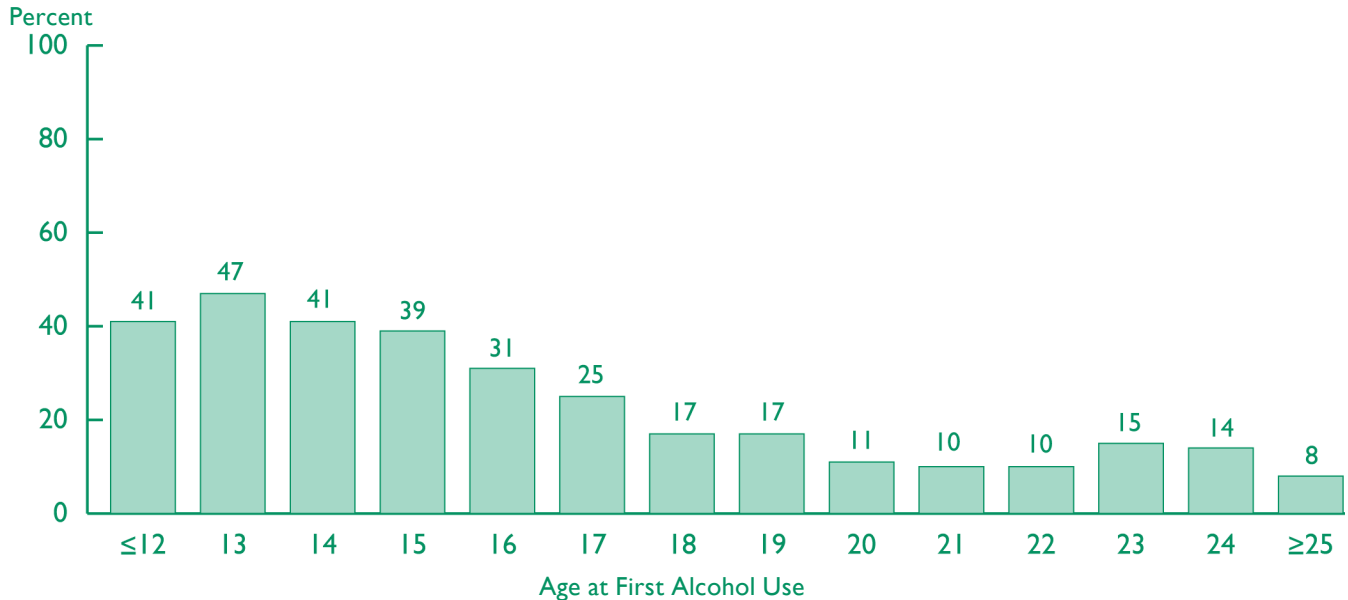
Alcohol dependence is influenced by both genetic and environmental factors. Persons with a family history of dependence have a higher chance of lifetime dependence than those without such a history (U.S. Department of Health and Human Services 2000). In addition, researchers have identified genes that influence people's susceptibility to alcohol dependence; however, hereditary influences alone do not predict a future of alcohol dependence. Environmental factors also play a significant role. For example, the child of a parent who is dependent on alcohol may be genetically predisposed to alcohol dependence but may effectively thwart it through education, self-monitoring, and social support (National Institute on Alcohol Abuse and Alcoholism 1995). Conversely, neurochemical changes in the brain caused by repeated abuse of substances such as alcohol can lead to neurological substance dependence, even if the individual has no genetic vulnerability to addiction disorders (Center for Substance Abuse Treatment 1999).

Preventing drinking among youth is important, not only because drinking alcohol is illegal for persons younger than age 21, but also because postponing the onset of alcohol use decreases the likelihood of developing dependence later in life. About 40 percent of those who start drinking at age 15 or younger develop alcohol dependence at some point; for those who start drinking at age 21 or older, the figure is approximately 10 percent (see figure 1) (Grant and Dawson 1997). Several factors may help discourage or at least postpone alcohol use. Parental support, communication, and monitoring are significantly related to whether adolescents drink, the amount they drink, and the frequency of their drinking. Adolescents' drinking behavior is also related to their friends' acceptance or rejection of drinking and whether their friends drink (National Institute on Alcohol Abuse and Alcoholism 1997).

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Figure 1. Percentage of Adults Diagnosed With Lifetime Alcohol Dependence by Age at First Alcohol Use



Source: Grant and Dawson 1997.

Consequences of Problem Alcohol Use

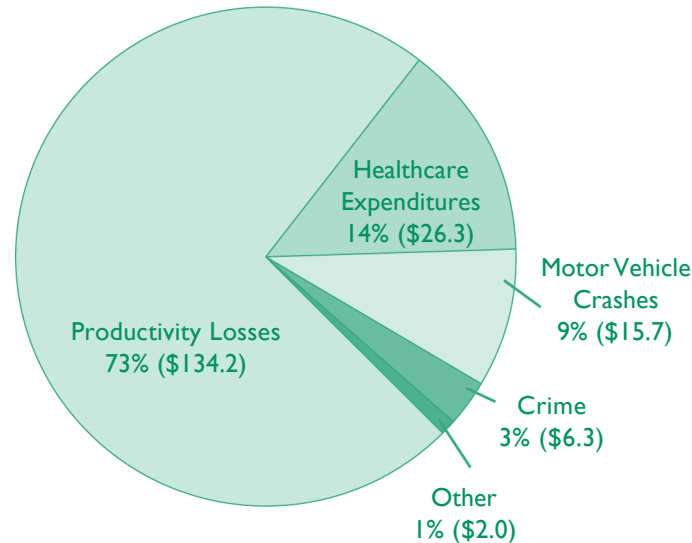
Identifying and eliminating problem drinking behaviors are important for many reasons. Problem alcohol use of any degree of severity may disrupt family and social relationships and lead to psychological problems, violence and aggression, and legal problems. Problem alcohol use is also linked to an increased risk of injuries, including those resulting from automobile crashes, falls, and fires. Not only does the risk of injury increase with the amount of alcohol consumed, but this risk begins to rise at relatively low levels of consumption. Problem drinking may also contribute to unsafe sex practices leading to an increased incidence of HIV/AIDS, hepatitis, and other sexually transmitted diseases. Finally, higher levels of alcohol consumption are associated with a greater risk of negative health effects, including a weakened immune system, tuberculosis, coronary heart disease, stroke, liver cirrhosis, and cancer (National Institute on Alcohol Abuse and Alcoholism 2000).

The most recent calculation of the overall economic costs of alcohol problems was estimated by the National Institute on Alcohol Abuse and Alcoholism at more than \$184 billion in 1998 (see figure 2). More than 70 percent of these costs were attributed to productivity losses (\$134.2 billion) caused by impaired workplace and household productivity related to alcohol use, worktime lost by incarcerated offenders and victims of alcohol-related crime, and alcohol-related premature death. Other economic costs of alcohol problems include healthcare expenditures related to the prevention and treatment of alcohol abuse and dependence and the medical consequences of alcohol consumption (\$26.3 billion), administrative and property damage costs from alcohol-related motor vehicle crashes (\$15.7 billion), criminal justice system costs stemming from alcohol-related crime (\$6.3 billion), fire destruction attributable to alcohol use (\$1.5 billion), and alcohol-related social welfare expenditures (\$0.5 billion) (National Institute on Alcohol Abuse and Alcoholism 2000).

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Figure 2. Estimated Economic Costs of Alcohol Abuse in the United States, 1998 (in billions of dollars)



Source: National Institute on Alcohol Abuse and Alcoholism 2000.

Detection and Treatment of Alcohol Use Problems

Prevention of and early intervention in alcohol problems are important to reduce their consequences and related social and economic costs. Alcohol screening attempts to identify both risky drinkers and drinkers who are experiencing symptoms of alcohol abuse or dependence. Screening tools range from brief self-administered questionnaires to lengthy clinician-administered interviews. Screening for co-occurring mental disorders is also essential for planning an effective intervention.

Once an alcohol problem has been identified, it should be treated appropriately. Not only do affected individuals experience different types of alcohol problems; each individual has different characteristics, strengths, and weaknesses that should be considered when assessing what treatment methods are most appropriate. A comprehensive and effective assessment should provide a detailed description of the kind of alcohol problem experienced by a particular individual at a specific time (Institute of Medicine 1990).

In general, persons identified as risky drinkers—those experiencing mild or moderate alcohol problems—may benefit most from brief interventions, which usually incorporate counseling and education sessions that provide practical advice and build skills (Babor and Higgins-Biddle 2000; Institute of Medicine 1990). Typically used by a primary care provider, brief interventions are designed to reduce alcohol use, thus minimizing the risk of developing alcohol-related problems (Fleming and Manwell 1999). Research has shown that brief interventions are effective in reducing drinking and related problems (Babor and Higgins-Biddle 2000).

Brief interventions are insufficient for persons diagnosed with alcohol dependence. These persons may benefit more from intensive treatment approaches, which can include psychological, pharmacological, social, and medical services. The primary goal of all treatment programs should be to eliminate alcohol use as a factor contributing to physical, emotional, and social problems (Institute of Medicine 1990).

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Providing Treatment Referrals

The Substance Abuse and Mental Health Services Administration provides information about local treatment programs (1-800-662-HELP). In addition, the Substance Abuse Treatment Facility Locator (www.findtreatment.samhsa.gov) provides a searchable directory of more than 11,000 alcohol and drug treatment programs.

What You Can Do To Raise Awareness

- **Employers:** Provide educational materials about potential alcohol use problems and institute employee assistance programs. Visit www.workplace.samhsa.gov for more information.
- **Faith-Based Communities:** Provide training to clergy so that they understand the nature and signs of potential alcohol use problems and can provide referrals to community treatment resources. The *Substance Abuse Resource Guide: Faith Communities* (available online at www.ncadi.samhsa.gov) provides additional resources.
- **Educators:** Provide parents and students with information on drinking. Lesson plans, activities, and parent information for fifth graders are available online at www.ncadi.samhsa.gov. The publication *Keeping Your Kids Drug-Free* (available online at www.ncadi.samhsa.gov/govpubs/phd884/default.pdf) also provides valuable information for parents.

National Alcohol Screening Day

The National Alcohol Screening Day (NASD) program, the Nation's only large-scale screening and early intervention program for alcohol problems, has screened more than 50,000 individuals since its inception in 1999. Screenings are conducted at community-based healthcare facilities, primary care offices, and colleges. NASD is held annually in April and is organized by the nonprofit organization Screening for Mental Health, Inc., with major support from the National Institute on Alcohol Abuse and Alcoholism, the Center for Substance Abuse Treatment, and the Center for Substance Abuse Prevention.

For more information, visit www.mentalhealthscreening.org or contact Screening for Mental Health, Inc., at 781-239-0071 or info@mentalhealthscreening.org.

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Treating Alcohol Problems

Most people who drink do so without adverse consequences. However, some may develop alcohol problems that require some type of intervention or treatment. In 2002, nearly two-thirds of the 3.5 million persons who received treatment for a substance use disorder in the past year received treatment for alcohol problems—an estimated 2.4 million persons (Substance Abuse and Mental Health Services Administration [SAMHSA] 2003). Problem alcohol use can lead to various physical, psychological, and social consequences. Early detection and treatment of alcohol problems can minimize or prevent these consequences and related costs. This issue of *Substance Abuse in Brief* discusses several aspects of treatment, including identifying problem alcohol use, applying brief interventions, introducing behavioral treatment approaches, and providing supportive services and appropriate treatments.

Identifying Alcohol Problems

Identifying risky drinking behavior, alcohol abuse, or alcohol dependence can be difficult. Related health, social, and personal problems often develop slowly and may not be detected without a precipitating event such as a workplace crisis, an incident involving the police, or an alcohol-related automobile crash. In addition, people often are reluctant to acknowledge or discuss alcohol-related problems, even with their doctors. One study found that approximately half of those with alcohol use disorders never mentioned the problem to their doctors and, of those who did, only half were diagnosed as a result (Commaner et al. 1999). Studies such as this point to the importance of routine screening and assessment by primary care providers to detect and identify problems with alcohol consumption (Center for Substance Abuse Treatment [CSAT] 1997).

Health care providers have a unique opportunity to identify individuals in their care with substance use disorders at an early stage. Health care providers should screen all patients routinely for problems with alcohol by asking questions to learn how much alcohol they drink and how often. They also should ask whether patients' use of alcohol creates problems in their daily lives and relationships, such as frequent absences from work or arguments with family members about alcohol use.

Various screening tests for alcohol use are available for use by the trained health care clinician, including Alcohol Use Disorders Identification Test (AUDIT) questionnaires and the CAGE instrument. Regardless of length or type, screening instruments have the same goal—to identify individuals who are or may become problem drinkers (CSAT 1997).

Inside

- 2 Brief Interventions
- 2 Treatment Approaches
- 3 Supportive Services
- 4 Treatments Using Medications
- 4 Treatment Effectiveness
- 6 What You Can Do To Increase Awareness

When health care providers ask specific questions about alcohol use, patients have an opportunity to share their concerns and reportedly are two to three times more likely to speak again about their alcohol use with a health care professional. In addition, when such discussions include other health topics such as exercise, diet, weight control, and medications, both providers and patients may feel more comfortable discussing problems with alcohol or other substance use (CSAT 1997).

Once an alcohol problem is identified, finding appropriate treatment for the individual is the next step. The level of treatment required depends on the type and severity of alcohol use and any associated problems the person may have. For example, a person with mild alcohol problems usually can benefit from a brief intervention; someone with more severe alcohol problems may require specialized treatment services (Fleming and Manwell 1999). To guide treatment planning further, a substance abuse treatment specialist or a physician trained in addiction medicine also can assess the person's mental and behavioral status.



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Brief Interventions

Individuals identified with mild-to-moderate drinking problems may benefit most from a brief intervention, a time-limited, client-centered counseling strategy focused on changing behavior and improving compliance with therapy. Brief interventions typically include five components:

1. A statement of medical concern from the counselor or health care provider about the client's alcohol use
2. Screening and assessment to determine the nature of the alcohol problem
3. Feedback and advice on how to abstain from or reduce alcohol use
4. A course of action that sets specific goals for abstaining from drinking or reducing alcohol consumption
5. A summary of the discussion and the agreed-on course of action and the scheduling of a followup appointment.

Brief interventions usually can be conducted in less than half an hour, making them especially useful in settings in which health care providers have limited time, such as hospitals, primary care clinics, and urgent care facilities. For information on conducting brief interventions in primary care settings, see Treatment Improvement Protocol (TIP) 24, *A Guide to Substance Abuse Services for Primary Care Clinicians* (CSAT 1997).

Brief interventions often succeed in reducing clients' alcohol consumption and related problems as well as their use of health care services for alcohol-related medical conditions and trauma (Fleming et al. 2002; Fuller and Hiller-Sturmhofel 1999). An estimated 15 to 20 million heavy drinkers potentially could be helped by brief interventions that might prevent adverse alcohol-related consequences, such as accidents and emergency room visits (CSAT 1997).

Brief interventions have been found to be more effective than no intervention and often are as effective as a more extensive treatment. Brief interventions also can be cost effective. A recent study found that every \$10,000 a physician invested in brief alcohol intervention reduced potential health care costs by an estimated \$43,000 (Fleming et al. 2002).

Treatment Approaches

People with mild-to-moderate alcohol use problems often respond well to brief interventions. However, those diagnosed with alcohol use disorders or dependence require more intensive behavioral treatment approaches, such as cognitive behavioral therapy and motivational enhancement therapy.

Cognitive behavioral approaches to alcohol treatment help clients identify high-risk, relapse situations; learn and rehearse strategies for coping with these situations; and recognize and cope with their cravings for alcohol and its effects (Kadden 2001). Clients participate in role-playing activities and are assigned homework to help develop behavioral and cognitive skills that enable them to cope better with situations that might tempt them to resume former alcohol habits.

Locating Screening and Assessment Tools

Numerous screening and assessment tools, including several for specific populations such as youth, can be obtained from SAMHSA's National Clearinghouse for Alcohol and Drug Information (NCADI) at www.ncadi.samhsa.gov or by calling toll free 1-800-729-6686, Hablamos Español 1-877-767-8432, or TDD (hearing impaired) 1-800-487-4889.

Motivational enhancement therapy encourages clients to use their own resources to change their behavior. Based on a therapist's assessment of the type and severity of clients' drinking-associated problems, clients receive structured feedback to stimulate their motivation to change (Fuller and Hiller-Sturmhofel 1999). Research has shown that cognitive behavioral and motivational therapies have comparable long-term success rates. According to one study, 24 percent of clients in cognitive behavioral therapy and 27 percent in motivational enhancement therapy were abstinent three years after treatment (Project MATCH Research Group 1998).

Another approach, known as 12-Step facilitation, adapts traditional 12-Step methods to behavioral therapy.

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Outpatient or Inpatient Treatment?

Depending on their circumstances, clients may receive inpatient treatment, outpatient treatment, or a combination of both. Long-term treatment outcomes of inpatient and outpatient clients appear similar (Fuller and Hiller-Sturmhofel 1999; National Institute on Alcohol Abuse and Alcoholism [NIAAA] 2000), yet individual client characteristics and the nature of the alcohol problem may make one type of treatment more appropriate than the other.

Outpatient programs

- May range from counseling once or twice a week to an all-day or evening program
- Enable clients to maintain family and social relationships while receiving treatment
- Typically cost less than inpatient treatment
- May be appropriate for people with adequate social support whose withdrawal symptoms are mild to moderate and who do not have co-occurring medical or psychiatric impairments

Inpatient programs

- May last from a few weeks to more than 6 months
- Eliminate the need for transportation to and from treatment
- Provide around-the-clock professional help for managing clients' medical and psychological problems
- Are appropriate for people who live in disruptive environments, have difficult work situations, are at risk for life-threatening withdrawal symptoms, or require care for additional medical or psychiatric conditions

Supportive Services

Programs that provide services for people dependent on or addicted to alcohol can be much more effective when they also address clients' social, family, and practical needs. Supportive services can be crucial in keeping clients in treatment and preventing relapse. Self-help approaches, such as the 12-Step Alcoholics Anonymous program, provide support through the recovery process. Clients attend regular meetings and often maintain a close relationship with a sponsor who is an experienced member of the group (Fuller and Hiller-Sturmhofel 1999). Self-help programs commonly are used in conjunction with formal alcohol treatment programs. There is a strong correlation between attending self-help meetings during and after treatment and successful recovery from alcohol use disorders (NIAAA 2000).

Clients also experience better outcomes when they receive additional services that help them stay in treatment, such as childcare, family counseling, and training in interpersonal and parenting skills. Services that address clients' needs for practical help with education, job training, and legal, housing, and transportation issues also have a positive effect on treatment outcomes (CSAT 2000). For example, one SAMHSA study found that clients in residential treatment programs were six times more likely to stay in treatment for 90 days or longer if they also were enrolled in educational training (Simpson et al. 1997). Another SAMHSA study found that clients who received vocational training services were nearly three times more likely to complete treatment (CSAT 1999a).

Know Your Treatment Community

Professionals working in health care, social service, criminal justice, and mental health fields should be familiar with available resources for patients with alcohol use disorders. Each State has a drug and alcohol authority that can provide information about licensed treatment programs (for additional information, visit www.findtreatment.samhsa.gov/ufds/abusedirectors). CSAT's Substance Abuse Treatment Facility Locator also can help identify treatment centers and support groups in local communities (visit www.findtreatment.samhsa.gov or call 1-800-662-HELP).

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Treatments Using Medications

People in treatment for alcohol dependence also can benefit from appropriate medications. Today, two prescription drugs approved by the Food and Drug Administration are used to treat alcohol dependence.

Disulfiram, an aversive medication, provides a powerful incentive to avoid alcohol by causing severe physical symptoms (e.g., nausea, vomiting, cardiovascular changes) when a client drinks. However, this medication does not eliminate the craving for alcohol. Patients—particularly those with low motivation to abstain—may stop taking the medication and relapse (West et al. 1999).

Naltrexone, which suppresses alcohol craving, was approved for use in 1995. It works by diminishing alcohol's pleasurable stimulant effects, while magnifying negative effects such as grogginess and lack of energy (NIAAA 2000). Naltrexone's adverse side effects may include liver toxicity, so this drug should not be given to patients with acute hepatitis or liver failure. Before treatment with naltrexone, patients should be tested for liver function, with periodic tests during treatment. Naltrexone may cause or aggravate withdrawal in people who are physiologically dependent on opioids (CSAT 1998).

Treatment Effectiveness

Numerous studies have demonstrated that people can be treated effectively for alcohol dependence. A nationally representative study of treatment outcomes found that the number of days per month that alcohol was consumed by clients in treatment decreased from 17 days before treatment to 10 days after treatment (SAMHSA 1998). SAMHSA's National Treatment Improvement Evaluation Study found that the percentage of clients in treatment who reported getting drunk decreased from 33 percent in the month before the study to 24 percent following treatment (CSAT 1999a).

Treatment not only reduces alcohol use, but also has been shown to reduce other alcohol-related problems (Figure 1). For example, in one study, posttreatment clients committed fewer crimes (down from 24 to 11 percent) and experienced an increase in employment (up from 29 to 54 percent) (CSAT 1999b). Another study found that clients used fewer health services after alcohol treatment, particularly more expensive ones such as inpatient stays and emergency room services (Armstrong et al. 2001).

Posttreatment improvements like these benefit the health care system and society at large, as well as the individuals who are helped, their families, and their communities. Preliminary findings of the Persistent Effects of Treatment Studies indicate that 2 years after treatment, each dollar spent on alcohol and drug treatment resulted in a saving of \$6.40 per patient to society due to lower costs for health care and criminal justice services and increased earnings (Harwood et al. 2001).

Figure 1. Comparison of Five Pretreatment and Posttreatment Variables in Treatment Clients



Source: CSAT 1999b.

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What You Can Do To Increase Awareness

- **Health Care Providers:** Routinely ask patients about alcohol use, screen for alcohol-related problems, and conduct brief interventions when appropriate. For practical information on the role of health care providers in the treatment process, consult CSAT's TIP 24, *A Guide to Substance Abuse Services for Primary Care Clinicians* (CSAT 1997).
- **Faith-Based and Community Organizations:** Work together to provide integrated education and support to those with alcohol problems. For additional information on faith-based and community partnerships, visit HHS-SAMHSA's Faith-Based and Community Initiative's Web site at www.samhsa.gov/faithbased.