

Alcohol Fact Sheet



A leader in providing behavioral health services

Alcohol and Tobacco

Extensive research supports the popular notion that “smokers drink and drinkers smoke.” Moreover, the heaviest alcohol consumers are also the heaviest consumers of tobacco. Concurrent use of these drugs poses a significant public health threat. Society has attempted to minimize

the consequences of using both alcohol and tobacco through public policy actions, including health warning labels, restrictions on advertising, and age restrictions on use.



Concurrent Use

Many people today still use both alcohol and tobacco products. The behavioral effects of these two drugs differ since they generally do not act on the same target sites in the brain. There is some evidence they may share, or partly share, certain physical properties.

Current studies suggest the initiation of alcohol or nicotine use may be precipitated by similar personality characteristics in the user, such as impulsivity and sensation seeking. Moreover, the mechanisms underlying the development of dependence may be similar for these products. The strong association between al-

Certain factors, such as reinforcing drug effects, conditioning processes, automatic behavior, and stress, may influence the development of dependency on both drugs.

cohol consumption and cigarette smoking is also likely to be attributable to multiple factors, including pharmacological actions common to both alcohol and nicotine.

The use of drugs outside clinical medicine is motivated by many factors, including experimentation, peer pressure and self-medicating for psychological problems.

Recently, a survey of 845 persons treated for alcoholism revealed that of 222 people who had died over a 12-year period; 74 of these died from alcohol-related causes, while 111 were related to smoking.

Between 80 and 95 percent of alcoholics smoke cigarettes at a rate that is three times higher than the population as a whole.

Inside this issue:

Concurrent Use	1
Reasons for Concurrent Use	2
Co-Occurring Effects on Pregnancy	2
Cancer Risks	3
Treatment Issues	3
The Path to Healing	4

Approximately 70 percent of alcoholics are heavy smokers (i.e., smoking more than one pack of cigarettes per day), compared with 10 percent of the general population.

Among smoking alcoholics, the initiation of regular cigarette smoking typically precedes the onset of alcoholism by many years.

Concurrent Use

Possible reasons for the concurrent use of alcohol and tobacco falls into two broad categories: either these drugs may increase the desired effects of the other, or they may decrease the unpleasant effects of the other. Such interactions may well involve processes of reinforcement or tolerance.

Most adult users of alcohol or tobacco first tried these drugs during their early teens.

Reinforcement refers to the physiological processes by which a behavior--such as consumption of drugs--becomes habitual.

A key process in reinforcement for some drugs occurs when nerve cells release the chemical messenger dopamine into a small area of the brain called the nucleus accumbens following use of the drug.

Tolerance is decreased sensitivity to a given effect of a drug such that more doses are needed to achieve the same effect.

Cross-tolerance between alcohol and tobacco might lead to increased consumption of both drugs in an attempt to regain former levels of reward.

Long-term administration of nicotine in animals can induce tolerance to some of alcohol's reinforcing effects, and chronic alcohol administration induces tolerance to some effects of nicotine.

A third possible reason for concurrent use is that one drug may alter the metabolism of the other, in turn affecting its absorption, distribution, or elimination from the body--but this has not been clearly established.

Co-Occurring Effects on Pregnancy

Research has shown that a mother's use of cigarettes, alcohol or other drugs during pregnancy can have damaging effects on the unborn child. These substances may be dangerous to the fetus' developing brain. It appears that both alcohol and the nicotine in cigarettes may distort developing nerve cells.

Understanding the effects of prenatal exposure has allowed researchers to identify those characteristics that are uniquely related to tobacco and those that are affected by alcohol exposure.

Nearly 30 years ago, scientists first coined the term "**fetal alcohol syndrome**" (FAS) to describe a pattern of birth defects found in children of mothers who consumed alcohol during pregnancy.

FAS is a condition that can lead to low birth weight, intellectual impairment and certain physical defects. Many children born with FAS show

much the same hyperactivity, inattention and impulsivity as children with ADHD.



Today, FAS remains the leading known, preventable cause of mental retardation.

Behavioral and neurological prob-

lems associated with prenatal alcohol and nicotine exposure may lead to poor academic performance as well as legal and employment difficulties in adolescence and adulthood.

Vulnerability to a given alcohol level during pregnancy varies markedly from person to person. This reflects possible genetic factors, including nutritional status, environmental factors, co-occurring diseases, and maternal age.

FAS could be completely eliminated if pregnant women did not consume alcohol.

Despite attempts to increase public awareness of the risks involved, increasing numbers of women are smoking and drinking during pregnancy.

Cancer Risks

Approximately 4,000 chemical substances are generated by the chemical reactions that occur in the intense heat of a burning cigarette. A group of these chemicals, collectively known as tar, is carried into the lungs with inhaled smoke.

The bloodstream then distributes the components of tar throughout the body. Certain enzymes found mainly in the liver (i.e., microsomal enzymes) convert some ingredients of tar into chemicals that can

cause cancer. Long-term alcohol consumption can activate some microsomal enzymes, greatly increasing their activity and contributing to smoking-related cancers.

Microsomal enzymes are found not only in the liver but also in the lungs and digestive tract, which are major portals of entry for tobacco smoke. The esophagus may be particularly susceptible, because it lacks an efficient mechanism for removing toxic substances pro-

duced by activated microsomal enzymes. Consistent with these observations, alcohol has been shown to promote esophageal tumors in laboratory animals exposed simultaneously to specific components of tar and alcohol.

Alcoholics frequently exhibit significant deficiencies of zinc and vitamin A, substances that provide some protection against cancer.

Treatment Issues

Until recently, many addictions counselors have not directly addressed the issue of smoking cessation. This is probably due in part to their concern that the stress of quitting smoking may well jeopardize an alcoholic's early stages of recovery.

While research has not confirmed this belief, only one study has evaluated the progress of residents in an alcoholism treatment facility who were concurrently undergoing a smoking cessation program.

Little research data currently exists that suggests alcoholism recovery may assist nicotine abstinence. Some patients participating in concurrent treatment for nicotine addiction during residential treatment however have achieved at least a temporary reduction in smoking.

Following the lead of other health facilities, addictions treatment facili-

ties are now slowly moving to become smoke-free. These steps will provide new opportunities for studying concurrent treatment programs. Initial evaluations suggest that no-smoking policies are not always feasible in complex residential treatment settings.



Problems often encountered in smoke-free alcoholism treatment programs include surreptitious smoking by patients as well as by staff. Some researchers have suggested modifying smoking cessation programs to conform with the

structure and language of 12 Step alcoholism programs.

Nicotine patch therapy for smoking alcoholics may require higher doses of nicotine than are usually applied, because of alcohol-induced tolerance to some of nicotine's effects.

Alcoholics with a history of depressive disorders are generally less successful at smoking cessation efforts than are subjects without such a history. Smoking may diminish the chances of recurring depression in some people, while in some people a major depressive episode may follow smoking cessation.

A major clinical consideration is that activation of microsomal enzymes by alcohol and tobacco tar can reduce the effectiveness of antidepressant medications.

Medication levels should be carefully monitored in patients undergoing treatment for depression who are addicted to alcohol and tobacco.

The Path to Healing

Gaining the benefits of treatment begins by recognizing the signs of addictions. This step is best facilitated by having a comprehensive assessment by a qualified healthcare professional. Although addictions can be diagnosed by primary care physicians, most often the physician will refer the patient to a psychiatrist, psychologist, counselor, or other professionals specializing in addictions.

Treatment is a partnership between the patient and the healthcare provider. It is important that informed consumers understand their treatment options and discuss all concerns with a treatment provider as they arise.

A key element of Rimrock's treatment is the active involvement of patients in the management of their own illness.

Empowerment is developed through the use of patient education, skills training and a strong emphasis on encouraging the individual patient to accept responsibility in managing their own condition. Along with the empowerment of our patients is the emphasis on a treatment regimen which includes comprehensive clinical assessments and individualized patient plans.

Another important part of Rimrock's program is the emphasis we place on the integration of a broad spectrum of community, health, and human services for the benefit of the patient. This includes addressing patient's physical, psychological, social and economic

needs, which improves the likelihood of a successful treatment experience.

Healthcare services should be readily available to those persons needing treatment for addictions, since taking advantage of opportunities when they are ready for treatment is often crucial. Many times, patients can easily be lost in red tape if treatment is not immediately available or is not readily accessible.



Counseling and other behavioral therapies are critical components of effective treatment for addiction. In therapy, patients address issues of motivation, build skills to resist drug use, replace drug-using activities with constructive and rewarding non-drug-using activities, and improve problem-solving abilities. Behavioral therapy also facilitates interpersonal relationships and the individual's ability to function in the family and community.

Successful recovery in addiction treatment is characterized by the integration of personal, family, professional and other community resources toward the goal of enhancing the duration and quality of life of those we serve.

For further information about treatment for Addictions, please call Barbara Hansen, Rimrock Foundation Admissions Supervisor at 1-800-227-3953 or 1-406-248-3175.

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