

## Type A or B? Classification May Help in Treating Cocaine Abuse

By Neil Swan, NIDA Notes Staff Writer

For a number of years, researchers have been testing the concept of classifying, or subtyping, alcoholics as Type A or Type B. Now they are finding the concept useful in studying cocaine abusers, too.

Subtyping is a system for classifying and studying individuals who share one or more common characteristics. Subtyping alcoholics provides a greater understanding of the complex interactions between genetic, personality, and environmental risk factors in the development of alcoholism, as well as resiliency against succumbing to these risk factors.

This typing process for alcoholics assesses multiple characteristics of each client, such as factors leading to abuse, severity of symptoms, and consequences of heavy drinking. By typing alcoholics as A or B using defining characteristics, researchers can better sort out the factors associated with their abuse problems and devise appropriate treatment strategies.

Alcohol abuse is more severe among Type B alcoholics than among those who are Type A. Type B alcoholism appears to be more related to hereditary factors than Type A and to be more likely to occur among men than women. Type Bs are more impulsive and tend to have a stronger family history of alcohol abuse; they have more childhood conduct problems and more severe alcohol dependence, polydrug abuse, and psychiatric disorders, especially antisocial personality.

### Classifying Cocaine Abusers

	Type A	Type B
Cause of Abuse Problem	More Environmental	More Genetic
Gender	Equal Male/Female	More Male
Personality	Low Impulsivity and Sensation Seeking, High Harm Avoidance	High Impulsivity, Sensation Seeking
Childhood Factors	Few Early Risk Factors	Conduct Disorder
Age of Onset	Later	Earlier

Substance Abuse Severity	Less Severe, More Episodic	More Chronic and Severe; Polydrug
Psychopathology	Lower Severity, More Affective	Higher Severity, More Antisocial

*After years of studies, researchers are able to identify factors that classify alcoholics as Type A or Type B. Recent NIDA-funded studies show that, in general, the same multiple criteria are valid in classifying cocaine abusers. Results may prove useful in explaining different causes of abuse and in designing specific prevention and treatment interventions*

Inspired by advances in subtyping alcoholics, Dr. Samuel A. Ball of Yale University School of Medicine and his colleagues conducted a NIDA-funded study examining whether subtyping is valid for cocaine abusers as well. They found strong evidence that it is.

"Our research may prove useful in explaining different causes of abuse in different types of cocaine abusers," says Dr. Ball. "We found that certain vulnerability factors, such as family history, sensation-seeking behavior, and childhood conduct problems, seem to predispose cocaine users to a more virulent form of cocaine dependence - Type B," he explains. "Other cocaine abusers who don't have these characteristics [Type As] may develop their cocaine dependence more from social or environmental influences relative to inherited, temperamental, or psychiatric influences."

The researchers studied abuse characteristics in 399 cocaine abusers, 69 percent of whom were male. Of these, 298 had sought treatment, 149 in an outpatient treatment program and another 149 in an inpatient, hospital-based program. The remaining 101 were cocaine abusers not in treatment. The study participants had a median age of 28 and were, generally, single, high school graduates, and had a low socioeconomic status. Fifty percent were white, 48 percent were African American, and 2 percent were Hispanic.

As part of a larger diagnostic study of cocaine abusers, for which Yale University's Dr. Bruce J. Rounsaville was principal investigator, participants were given a battery of standard assessment tests that included the Sensation Seeking Scale, the Addiction Severity Index, the Schedule for Affective Disorders and Schizophrenia, and Family History Research Diagnostic Criteria tests. Subsequently, Dr. Ball and his colleagues sorted these measures into three variables, similar to the factors generally used to categorize alcoholics:

- predisease risk factors, such as family history of substance abuse, childhood conduct disorder and attention-deficit disorder, sensation-seeking traits, and age when drug abuse began;
- substance abuse variables, including frequency of cocaine use, years of heavy cocaine use, cocaine dependence symptoms, alcohol dependence symptoms, polydrug use, and medical and social consequences; and
- psychiatric problems, such as symptoms of depression and antisocial personality disorder, and the severity of these psychiatric problems.

Based on placement within the variables identified by the assessment tests, the researchers classified the cocaine-abusing study participants as either Type A or Type B and then examined differences in behavioral and other characteristics between the two groups.

Researchers found that cocaine abusers classified as Type B scored higher than Type As in

assessments of sensation seeking, aggression, criminality, violence, and impairment of social adjustment. Type Bs also used greater amounts of cocaine more frequently and for longer durations than Type A cocaine abusers. Type Bs also suffered more adverse effects from their drug use, such as unconsciousness, chest pain, and violence, and they reported a greater degree of additional drug abuse to relieve withdrawal distress. Type B abusers became involved with cocaine at younger ages for: first use, first binge, first regular use, first daily use, and first symptoms of addiction.

No differences were found between the two subtypes in regard to the length of time between first use of cocaine and first symptoms of dependence; route of use, such as snorting, smoking, or injection; number of strategies used in attempting to control use; and previous periods of abstinence from illicit drugs or alcohol.

Overall, more than half of the participants were classified as Type As, but among those in inpatient treatment, there were nearly equal numbers of Type As and Bs. Among the outpatient and not-in-treatment participants, 75 percent were Type A. This suggests that studies assessing only cocaine abusers who are enrolled in inpatient treatment may not provide valid estimates of the relative proportion of Type A and B abusers who are in outpatient treatment or not in treatment, Dr. Ball warns.

With few exceptions, the classification model assessment results seemed consistent across gender and race. Although women and African Americans were Type As more often than men and whites were, a significant number of women and African Americans showed the kind of Type B abuse risk factors, severity, impairment, and antisocial behavior that some researchers had previously thought were related to alcoholism among men and among whites.

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## Percentages of Type A and Type B Cocaine Abusers

	Type A	Type B
Males	61%	39%
Females	79%	21%
African American Males	68%	32%
African American Females	86%	14%
White Males	57%	43%
White Females	78%	22%

*A classification of cocaine abusers by Dr. Samuel A. Ball shows results similar to those found in many studies of alcoholics. Although women and African Americans are more often Type As compared to men and whites, a significant number of women and African Americans nevertheless show the kind of Type B abuse risk factors, severity, impairment, and antisocial behavior thought by some earlier researchers to be related to alcoholism among men and among whites.*

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"If Type A substance abuse is in fact more influenced by social relationships and environment, relative to genetic and personality factors, then we might speculate that women and African

Americans might be more susceptible to developing alcohol or cocaine addictions for more socially, environmentally, or culturally determined reasons," says Dr. Ball. But future research is needed on this topic to determine if this typology holds in other ethnic groups such as Latinos/Hispanics, Asians, and Native Americans, as well as in other cultures and countries, he adds.

Dr. Rounsaville, who coauthored the study, notes that while there has been some experimental work using typology-based treatment and prognostic findings, the practice of assessing and classifying substance abusers as Type A or B is not now widely practiced in drug abuse treatment programs. For one thing, classification procedures must be validated and made suitable for simple, routine use in treatment programs. But typology research continues with hope that advances can lead to new insights for evaluating causes of substance abuse and for preventing and treating it in the treatment program setting, he adds.

## Sources

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