

**NOTE:** The original 1,000+ page manuscript for *Slaying the Dragon: The History of Addiction Treatment and Recovery in America* had to be cut by more than half before its first publication in 1998. This is an edited excerpt that was deleted from the original manuscript.

White, W. (2014). Amphetamines: The Early Story. Posted at [www.williamwhitepapers.com](http://www.williamwhitepapers.com)

## **Amphetamines: The Early Story**

**William L. White**

America's infatuation with drugs that stimulate begins with the introduction of tea and coffee and the rising popularity of cocaine in the 19th century. Medical technology added amphetamines, another family of stimulant drugs. Amphetamine was first synthesized by Lazar Edeleano in Germany in 1887. Although its stimulant effects were noted, no practical application of these effects were apparent until George Barger and Sir Henry Dale explored the potential medical uses of amphetamine in a 1910 monograph. In 1912 amphetamine was first used in the treatment of asthma, but its full emergence as a medicine and an intoxicant would have to await the introduction of the Benzedrine inhaler in 1932. Like the drugs that came before it, amphetamine would lie dormant within the culture for many years before its value as an intoxicant would be discovered.

Amphetamine's stimulation of the central nervous system was fully documented by Gordon Alles in 1927, and the first commercial amphetamine, Benzedrine, was released by Smith, Kline & French in 1932 as an inhaler. Benzedrine tablets were introduced several years later. Alles' research focused on creation of a synthetic version of the naturally occurring ephedrine, already being used in the treatment of asthma. Ephedrine itself would later be sought out as an intoxicant. Reports appeared in the medical literature documenting the use of amphetamines in the treatment of depression, obesity, narcolepsy (a disorder that produces sudden, brief, uncontrollable sleep during the day), and the congestion produced by asthma, colds, and hay fever. Benzedrine was also used to treat epilepsy, schizophrenia, enuresis (bed wetting), migraine, and alcoholism.

One of the more significant milestones in the use of amphetamines in medicine occurred in 1937, when Charles Bradley reported that amphetamines could improve the learning and overall behavior of hyperactive children in the school setting. He noted the "paradoxical tranquilizing effect" that the use of stimulants had on physically and emotionally aroused children. In the same year, other researchers noted that Benzedrine improved the test scores of behaviorally disturbed juvenile offenders. In drug therapy with children, the stimulant era had begun. Benzedrine was later replaced by other psychostimulants, including methylphenidate (Ritalin) and pemoline (Cylert) as pharmacological treatments of attention deficit disorder. The use of Ritalin to medicate children became so widespread among school children in the U.S. that some observers began to refer to the "three R's" as "reading, writing, and Ritalin."

The first report of use of amphetamine as an intoxicant came in 1936. In experiments at the University of Minnesota designed to test the effects of amphetamines, students participating in the experiments began to seek out the drug on their own. It hardly seemed probable that the

drug could have any kind of addictive properties. After all, at the time it was being recommended in the treatment of a number of addictive disorders.

During the Second World War, amphetamine use was institutionalized in the military forces of Germany, Japan, England, and the United States. Methamphetamine, first synthesized in 1919, was used to increase the endurance of the German Panzer troops in World War II. (Leake, 1970). Many of the 1.5 million U.S. soldiers returning home in 1945 did so with knowledge of the effects of amphetamines. Another surge in military use was noted during the Korean War, in which soldiers injected a mixture of amphetamine and heroin called a "speedball." The use of amphetamines as an anti-fatigue agent continued in the military into the 1960s and 1970s.

Knowledge of amphetamine's effects might have been fairly widespread in the American culture of the 1940s, as evidenced by the popularity of the song, "Who Put the Benzedrine in Mrs. Murphy's Ovaltine?" (Grinspoon & Hedblom, 1975). Although most of the people targeted for amphetamine prescriptions were women and children, black market amphetamines became popular among athletes, business executives, truck drivers, and students during the 1940s. Reports of amphetamine overdoses prompted the removal of the Benzedrine inhaler from the market in 1949. Some varieties of the stimulant-filled inhalers remained available without prescription into the 1960s. American drug companies also introduced new amphetamine-based drugs into the market during this period. Smith, Kline and French Laboratories introduced Dexedrine in 1945. Names such as Methedrine and Desoxyn also quietly entered American medicine, only to emerge later in the polydrug youth culture of the 1960s.

As the 1960s approached, amphetamines and related psychostimulants were being prescribed for weight control. The worst suppliers of amphetamines were the so-called "fat doctors." Calling themselves bariatricians, these doctors made a living selling amphetamines with the promise of their utility in losing weight. These doctors were responsible for addicting large numbers of women to amphetamines. They were also a primary source of the amphetamines that were diverted to the illicit drug culture in the 1960s (Finlator, 1973).

By the early 1960s, a large number of amphetamine products were available for medical use. The pharmaceutical companies also discovered that an amphetamine combined with a barbiturate resulted in fewer side effects than amphetamines used alone. Drug users also discovered that this combination produced a longer lasting sense of euphoria. This led to the introduction of new commercial drug preparations that combined amphetamines and barbiturates in the same pill.

## References

- Barger, G. & Dale, H. H. (1910). Chemical structure and sympathomimetic action of amines. *J. Physiol. (Lond.)*, 41, 19.
- Finlator, J. (1973). *The drugged nation*. NY: Simon and Schuster.
- Grinspoon, L. & Hedblom, P. (1975). *Speed culture: Amphetamine use and abuse in America*. MA: Harvard University Press.
- Leake, C. (1970). The long road for a drug from idea to use (story of amphetamines). In: Ayd, F. Ed. *Discoveries in biological psychiatry*. Philadelphia: J.B. Lippincott Company, pp 68-84).
- Prinzmetal, M. & Bloomberg, W. (1935). The use of benzedrine for the treatment of narcolepsy. *Journal of the American Medical Association*, 105, 2051.

White, W. L., & Webber, R. (1995). *Cocaine and other CNS stimulants*. Bloomington, IL: Lighthouse Institute.