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## Introduction of Barbiturates into Medicine

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**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.

Americans have long searched for an effective and safe medication that can relax body and mind. One of the first class of drugs with such potential there were the Bromide salts, whose early introduction is described by Lader.

*The first psychotropic drug to institute the noble tradition of introduction by mistake was bromide. Because potassium bromide was believed to lessen sexual urges and epilepsy was thought to be a consequence of masturbation, bromides were introduced by Locock for the treatment of epilepsy, apparently with gratifying results.* (Lader, 1991, p. 116)

The ability of the bromides to produce sedation brought them growing popularity during the 1870s. It wasn't long, however, before practitioners realized that the use of bromides brought with it the risk of accidental poisoning through a single high dose or through the cumulative effect of sustained use. There was also growing

recognition that people could become dependent on these drugs.

Chloral hydrate produced sleep, but, as the wisdom of the day had it, the only thing worse than the taste of chloral hydrate was its smell. Alcohol could be prescribed as a sedative, but with the drive toward prohibition, the use of alcohol in medicine was becoming the subject of great debate. Opiates were coming under increasing scrutiny and attack, and their use as a sleeping aid posed the risk of addiction. America needed a new sedative drug. Barbiturates seemed to be the perfect answer.

Barbiturate acid was first synthesized in Germany in 1864 by Adolf von Baeyer (Dundee & McLlroy, 1982). The first barbiturate sedative, barbitone, was described in 1903 by two scientists, von Mering and Fischer. Although barbiturate acid was first used in medicine in 1882, it was not used as a sedative until barbitone was released commercially in 1903 under the trade name Veronal. Veronal's use was

limited because its effects lasted so long. A second barbiturate, phenobarbital, was introduced in 1912 under the trade name Luminal. Two American chemists, H. Shonle and A. Moment, pioneered the procedures that made possible the inexpensive manufacture of a large number of barbiturate derivatives (Burger, 1986). More than a thousand barbiturate compounds have since been developed. About 50 of these have been available commercially to put people to sleep at night or calm them down in the daytime. Barbiturates filled a vacuum in American medicine, a vacuum created by the lack of an effective hypnotic sedative. Before the introduction of barbiturates, the options for sedation were limited and sometimes caused more problems than they solved.

Problems of misuse and dependence upon barbiturates developed slowly and invisibly over decades. There were a few early warnings about their potential effects. Charles B. Towns, who operated an addiction treatment hospital in New York City, declared in popular news magazines as early as 1912 that these new "hypnotics" were habit-forming and called for their rigorous control by the state. (Towns, 1912) He particularly noted the rising use of Veronal, Trional, and Sulphonal. (Towns, 1914) In 1928, Towns reflected back over his experience with these new "sedative and somnifacient" drugs.

*Our experience is that their ultimate effect is more devastating than morphine. Where tolerance is established for any of the numerous forms of these drugs--and their numbers are Legion!--the way lies open to insanity and, in many cases, suicide. (Towns, 1928, p.7)*

Use of barbiturates increased significantly during the 1930s and 1940s. As early as 1937, the American Medical Association issued a report, Evils from Promiscuous Use of Barbituric Acid and Derivative Drugs. The report voiced concern about the rising number of accidental deaths and suicides related to barbiturate use (Finlator, 1973). The first reports of barbiturate dependence

appeared in the 1940s. Barbiturates were particularly popular with addicts who could not find morphine or heroin during that decade. In 1940, one fourth of American hospital admissions for poisoning were due to acute barbiturate intoxication. These cases reflected both suicide attempts and the accidental overdose associated with excessive barbiturate use. In the early 1950s, American medical literature recognized the addictive properties of barbiturates, identified their withdrawal syndrome and medical complications, and outlined procedures for medical detoxification (Kreig & Bucholz, 1975).

A little-known chapter in the history of barbiturates concerns their use in psychiatry. During the 1930s, psychiatrists such as J. Stephen Horsley advocated a form of therapy called narco-analysis. In this treatment, intravenous injections of barbiturates and related substances were used to induce a semi-hypnotic state called "hypnotic narcosis" in which therapeutic sessions with the patient were conducted. Narco-analysis was reported to lower client resistance, speed the development of the therapeutic relationship, intensify transference, and improve the patient's ability to talk about his or her emotions and experience cathartic emotional release. (These same effects would later be used to justify the use of LSD in psychotherapy.) The specific drugs used in this procedure included Nembutal, sodium amytal, and sodium pentothal (Horsley, 1943).

By the 1950s, two groups of barbiturate users had emerged, one seeking relief from anxiety and the other seeking euphoria. The entry of words like "goofballs" and "thrill pills" into the constantly evolving American vocabulary signaled the growing presence of the thrill seeker. The later introduction of shorter-acting barbiturates such as Amytal, Nembutal, Seconal, and Tuinal heightened both their popularity and their potential for misuse for purposes of intoxication. During the first six decades of the 20th century, barbiturate and other sedative addiction was hidden behind the mask of legitimate therapeutic use. Its victims were virtually invisible until their

identities became public through their sudden and untimely deaths. However, the stage was set for the barbiturates to break into great visibility when the children who grew up watching their parents and neighbors consume these drugs began to use the drugs in the late 1960s and 1970s, not for sedation, but for intoxication.

The frantic search for new sedatives also produced a chapter in our history that underscores the tragic consequences that can unfold in the course of rapidly developing pharmacological breakthroughs. Among the many new sedatives and tranquilizers that came on the market in the 1950s was a West German-made sedative sold in Europe under the name Contergan. Contergan was widely marketed as a sleep aid. Its reputation for mild effects, its lack of side-effects, and its low price made it quite popular. The drug was widely sold in many countries, and in 1960 the William S. Merrell Company applied to the federal Food and Drug Administration (FDA) to sell the drug in the U.S. under the name Thalidomide. All of the supporting documentation spoke glowingly of the drug's safety and the benefits of its use. However, only 200 women in America had been exposed to the drug through an early testing program (Nuland, 1988, 449-451) due to the fierce resistance of Dr. Frances Kelsey of the FDA and Dr. Eugene Taussig, an authority on congenital disease, which held up the drug's approval and wide distribution in the U.S. Worldwide,

Thalidomide produced more than 5,000 cases of severe physical deformity in babies born to women who used it. It was one of the most horrible drug catastrophes of the modern era. Thalidomide's devastating effects were very difficult to identify because those effects occurred only if the mothers had used the drug during a brief and specific period of their pregnancy. The fact that pregnant women who took Thalidomide at other times in their pregnancy delivered normal children helped mask Thalidomide's potentially devastating effects. (Modell, 1967)

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