

Celebrities and substance abuse

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Numerous celebrities of the past half century have been plagued with substance abuse problems, with disastrous results. This article highlights some of the most famous cases and briefly discusses medical views of substance abuse from Osler's time to the present.

ELVIS PRESLEY

Elvis Presley, the undisputed king of rock and roll, had it all: a great voice, talent, and especially charisma. His performances were electrifying and his recordings set sales records. Being very generous, his acts of charity were legendary. His first album in April 1956 featured "Heart Break Hotel" and catapulted his fame. In 1957, Elvis was on top of the world. He proudly served his country in the US Army from 1958 to 1960. An image portraying the "young Elvis" was used by the US Postal Service as a stamp in 1993 and became the most popular US stamp of all time (*Figure*).

Elvis began declining in his last 3 to 4 years. He had difficulty performing; received unfavorable reviews; and experienced anger and depression, colon problems, weight gain and bloating, and bizarre behavior. He had "passed" a physical examination but died unexpectedly on August 16, 1977, in the bathroom of his Graceland mansion in Memphis, Tennessee. He was found on the floor by his girlfriend/fiancee, Ginger Alden, around 2:00 PM.

Elvis had visited the dentist the day before for a temporary crown and was given codeine. Later he called his physician, Dr. George Nichopoulos ("Dr. Nick"), for increased pain and was prescribed six hydromorphone tablets. Also, three packets of prescription drugs for an upcoming tour arrived, and each packet contained secobarbital, ethchlorvynol, diazepam, secobarbital/amobarbital, meperidine, and antidepressants, typical of what he took on tour.

Elvis played racquetball at 3:00 AM on the morning of his death and was noted to tire easily. Still, he seemed in a good mood and stayed up the rest of the night as usual, entertaining his friends and playing the piano and singing before he retired at 8:00 AM. (He usually went to bed between 6:00 and 7:00 AM.)

After being found at 2:00 PM, he was probably already dead. He was taken to the emergency room at Baptist Memorial Hospital and pronounced dead at 3:30 PM. Elvis was only



Figure. Watercolor of Elvis by Mark Stutzmann, from the Collection of the United States Postal Service.

42 years old. An autopsy failed to show an obvious cause of death, but 2 months later a toxicology report indicated polypharmacy: 14 drugs were found in his system, including codeine (at 10 times the therapeutic level), methaqualone (in a toxic amount), morphine, meperidine, ethchlorvynol, diazepam, and several barbiturates. The combination of central nervous system depressants and codeine was believed to be lethal. However, the medical examiner's office stuck to its original diagnosis of "cardiac arrhythmia."

In order to preserve the Elvis image and legacy, a "cover up" was initiated by the family and the pathologists. The stomach contents at autopsy were destroyed before analysis, no real police investigation was conducted, and no drugs were found at Graceland. Elvis' sudden death left many unanswered questions. Many, including F. Lee Bailey, have felt that Elvis might still be alive.

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MARILYN MONROE

On August 4, 1962, at age 36, Marilyn Monroe was found dead in her bedroom in the Brentwood section of Los Angeles. Her death was ruled a suicide from an overdose of barbiturates and chloral hydrate. However, her death is still a mystery, and many are convinced that she was murdered by organized crime, the FBI, or the CIA. There are numerous conspiracy theories.

An autopsy showed no trace of any drugs in her stomach but did show a purplish discoloration of the colon. Toxicology studies found a massive amount of pentobarbital and chloral hydrate in her body. It was suggested that the purple colon was a manifestation of an inflammatory response to barbiturates, possibly administered by enema. (She had enemas frequently, as did other Hollywood stars.) Again, following her death, there was a cover-up by the Los Angeles Police Department and the government.

JACKIE WILSON

Jackie Wilson, one of the first great rhythm and blues vocalists, was born in 1934. His father was an alcoholic, and Jackie started drinking cheap wine at age 9. In 1975, while performing in New Jersey, he had a massive heart attack followed by cardiopulmonary arrest. He was in a coma for 3 months, sustaining severe brain damage, and remained hospitalized for over 7 years until his death in 1984 at age 49.

HANK WILLIAMS

Hank Williams, who recorded 66 songs and wrote 50 of them himself, died at age 29. The exact cause of death is somewhat of a mystery, although Hank was known to be a binge alcoholic and abused opioid analgesics for chronic back pain. In addition, he took chloral hydrate frequently.

His last 48 hours were as follows. On December 30, 1952, Hank loaded up his 1952 Cadillac for a tour that would take him from Montgomery, Alabama, to West Virginia and Ohio. A 19-year-old college freshman was his driver. It was very cold, and a snowstorm covered the entire Southeast. En route, Hank drank heavily and received several injections of morphine from various doctors. He experienced convulsions and was noted to be wheezing. After very slow progress due to the weather, Hank was placed in the back seat of his Cadillac and covered with an overcoat. (In all likelihood, he was dying then.) Leaving Knoxville, Tennessee, around 10:45 PM, they drove through the night into West Virginia. At some point early on this New Year's morning, the driver headed back to pull Hank's coat over his body and noted that his hands were very cold. In the emergency room, Hank was pronounced dead at 7:00 AM on January 1, 1953.

An autopsy was performed in a nearby funeral home by a "Russian intern." He noted needle marks on Hank's arms and multiple bruises. Alcohol was found in his blood but no other drugs (because they didn't look for them). The official cause of death was "right ventricular dilatation," an unusual conclusion.

THE 27 CLUB

Next, we have the "27 club," celebrity entertainers who died at age 27 of substance abuse.

- Janice Joplin, rock singer, died in 1970 in Hollywood of a heroin overdose. She also drank quite heavily.
- Jimi Hendrix, a famous rock guitarist, died in 1970 in London of alcohol and barbiturate overdose.
- Jim Morrison, psychedelic rocker and lead singer of the Doors, died in 1971 at age 27 of a heroin overdose and was buried in Paris.
- Kurt Cobain, lead singer of the alternative rock band Nirvana, died in 1994 in Seattle of a heroin overdose and a self-inflicted gunshot wound of the head.

More recently, a 28-year-old nearly joined the club:

- Actor Heath Ledger died in January 2008 of an overdose of a number of prescription drugs, including codeine, temazepam, diazepam, and alprazolam.

DISCUSSION

The common denominator in all these young celebrity deaths is substance abuse, a disease that can result in depression, insomnia, personality changes, impaired judgment, and poor relationships. In some of these cases, medical care was somewhat questionable and inadequate, and self-medication was frequent. The deaths in many cases were shrouded in mystery due to cover-up attempts.

Celebrity patients frequently practice polypharmacy using multiple physicians, multiple drug stores, and multiple aliases to obtain medications. Denial increases as dependency worsens.

Prescription drugs, especially the opioid analgesics, now cause more deaths than heroin and cocaine. All of these drugs can cause central nervous system and respiratory depression. They form deadly combinations with barbiturates and other sedatives and with alcohol.

What would William Osler have done or suggested? It is known that Osler and his colleague, William H. Welch, were very supportive of the famous surgeon William S. Halsted, who before coming to Johns Hopkins had been treated for cocaine addiction by being switched to morphine. Later, Osler, as Halsted's physician, had a secret diary that documented Halsted's continued addiction to morphine. Osler wrote, "He could do his work on 3 grains/day." A later entry stated, "He got the amount down to 1½ grains/day and later possibly got on without it." However, in 1934, Welch stated, "Although it has been widely reported that Halsted conquered his addiction, this is not entirely true. As long as he lived, he will occasionally have a relapse and go back on the drug." Thus, Halsted led a life of controlled addiction. It is conceivable that a supportive, mutually trusting doctor-patient relationship played a large role in causing this favorable outcome, allowing Halsted's numerous achievements despite his addiction.

Society's view of drug addiction has changed very little since Osler's and Halsted's time and is still frequently approached with secrecy and denial. It should be noted that in the 19th century and the early 1900s, morphine usage was not only legal but more socially acceptable than alcohol. Morphine was

used during the American Civil War as a surgical anesthetic and was sent home with numerous wounded soldiers for pain relief. Several hundred thousand soldiers were addicted to morphine at the end of the war.

The federal drug laws were a response to the rampant opiate addiction problem in the USA at the end of the 19th century. Over the years, we have learned that addictive drugs change the brain by crossing the blood-brain barrier. By mimicking various neurotransmitters, they activate the mesolimbic reward system deep within the brain. The brain's metabolism is altered, craving is created, and one's personality is changed.

How might we do better? Although some advocates believe our "war on drugs" is a failure, legalizing drugs is probably not the answer. It would spark considerable problems. Permissive approaches in Sweden, the Netherlands, and the United Kingdom have later backtracked.

Progress is being made in the treatment of addiction. Residential treatment programs are effective. The rate of drug use among teenagers has been cut nearly in half since its peak 30 years ago. Drug courts are now common, and the criminal justice system has become the most powerful force in the country supporting addiction treatment. Education is the key—not only

teaching youth about the health dangers of specific drugs but also teaching about the disease of addiction. Finally, treatment programs should address general wellness and factors leading to addiction, including poverty, lack of education, impaired mental health, and abuse.

Addendum

At press time, another example of celebrity substance abuse has surfaced. The death of pop star Michael Jackson on June 25, 2009, is being investigated for this possibility.

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