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Club Drug Can Cut Craving for Alcohol, Researchers Say

Thomas S. May, Medical Writer

Introduction

Known variously on the street as Liquid Ecstasy, Liquid X, Georgia Home Boy, and Grievous Bodily Harm, gamma-hydroxybutyric acid (GHB) is an illegal "club drug" that has gained notoriety in recent years as a date-rape drug. Its bad reputation is not new: Severe reactions to the drug prompted the US Food and Drug Administration to ban GHB in 1990. Abuse of the drug as a diet aid, bodybuilding stimulant, and insomnia treatment had led to coma, seizures, and even death.

But according to some studies, this "sinister drug" can also be used to better effect. GHB has been used successfully as an anesthetic for children, as an aid in childbirth, and as a treatment for [narcolepsy](#). And according to recent studies, GHB shows promise as a treatment for [alcoholism](#).

People who abuse alcohol fight more than the bottle when they want to quit drinking: After excessive, long-term alcohol abuse, their brains adapt to the effects of this legal drug. As a result, when alcoholics try to stop, their desire to drink again is intense. This strong craving makes it very difficult to quit, and most don't: 80-90% of people treated for alcoholism relapse, even after years of not drinking.

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According to Italian researchers, GHB can tame these unhealthy cravings. In fact, it has been used to treat alcoholism in Europe for years.

In an article published in the April 2000 issue of the journal *Alcohol*, Luigi Gallimberti, MD, and his colleagues at the University of Padua reviewed two double-blind, placebo-controlled

studies that tested how effectively GHB could treat alcohol withdrawal. One study showed that "daily administration of 50 mg/kg [milligrams per kilogram] gamma-hydroxybutyric acid for three consecutive months reduced the number of drinks per day by approximately 50%, increased the days of abstinence approximately threefold, and reduced the alcohol craving score by up to 60%." These results show that GHB effectively treats alcohol dependence, the scientists concluded.

Reduces Craving

Similar results were also found in a study done by Giovanni Addolorato, MD, of the Catholic University of Rome, and his colleagues. "As far as GHB treatment for maintaining abstinence is concerned, the drug proved to be effective in reducing craving and in improving the abstinence rate in about 60-70% of alcoholics treated," Dr. Addolorato says. The investigators found that the rate of abstinence was even greater when the same amount of GHB (50 mg/kg/day) was administered more often (six times a day, instead of three times a day), in smaller doses.

Treating alcoholics with GHB is very similar to treating heroin addicts with methadone, the Italian researchers claim. Methadone maintenance treatment has been used for heroin addiction throughout the world for decades, and many studies have shown that it is useful and effective.

"Methadone treatment may make it easier for some [heroin] addicts to stop eventually," says Barry Beyerstein, PhD, a physiological psychologist and addiction expert at Simon Fraser University, British Columbia, Canada. "But the real value of methadone is that it reduces the craving and the withdrawal symptoms," he explains. "Methadone enables people to stop using needles and to stay on a relatively low dose that doesn't keep them 'bombed' all the time. As a result," he continues, "they may be able to turn their lives around, they can work, and they can be acceptable members of their families and of society in general."

Therapeutic doses of GHB do much less harm than consuming large amounts of alcohol.

Dr. Gallimberti finds similarities to the treatment of alcoholics with GHB. Although some alcoholics can stop taking GHB after 2 or 3 months, others may need maintenance treatment for many years, he says. But even those who need long-term treatment are much better off than those who are not treated at all and continue to abuse alcohol, Dr. Gallimberti argues. The reason for this, he says, is that therapeutic doses of GHB do much less harm than consuming large amounts of alcohol.

Continental Divide

Despite encouraging studies in Europe, GHB has not been used to treat alcoholism in other

parts of the world. David E. Smith, MD, medical director of the Haight Ashbury Free Clinics in San Francisco, explains the situation in the States: "GHB is not used legitimately in the United States because it is not a benign drug.

"In Italy, they focused on its benefits and tended to minimize its abuse, whereas here in the United States therapeutic benefit has not been established, and we are seeing a lot greater abuse and dependence," he adds.

Still, some addiction experts in the United States say that GHB treatment for alcoholism deserves further study. According to K. Michael Gibson, PhD, an associate professor at Oregon Health Sciences University, "GHB is better than alcohol, because alcohol has long-range hepatotoxic and neurotoxic effects [is poisonous to the liver and the nervous system], and these effects are not associated with GHB. Therefore, I think that GHB is going to demand more attention in the treatment of alcohol withdrawal syndrome in the future."

GHB and Alcohol: A Primer*

A growing body of evidence suggests that GHB reduces the effects of alcohol withdrawal by being a substitute for alcohol, like methadone in heroin addiction.

Alcohol and GHB share several pharmacological characteristics, suggesting that GHB may mimic the actions of alcohol in the central nervous system.

Like alcohol, GHB has a strong anti-anxiety effect.

The toxic effects of large amounts of alcohol normally consumed by alcoholics are well known. In controlled doses, GHB appears to be safer, as indicated by the reduction in liver damage in the treated patients.

Reports of coma, seizure, confusion, and hallucination that were induced by GHB were described mainly in healthy, nonalcoholic subjects who took the "street version" of the drug. These reactions were often related to acute toxicity and overdose.

Like alcohol, GHB possesses abuse potential because it is self-administered, both orally and intravenously.

Cases of craving for GHB that lead to abuse and possible dependence may occur during treatment. Therefore, GHB must be used under strict medical surveillance and with the cooperation of a trusted family member so that abuse is reported promptly.

*Excerpts from an interview with Dr. Giovanni Addolorato--one of the world's foremost

experts on the use of GHB for alcoholism.

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Source: Medscape Health

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Posted On Site: Sep. 2000

Publication Date: Aug. 2000

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