

# Addiction and Overdose Cases Linked to Illegal Party Pill Are on the Rise

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## STORY AT-A-GLANCE

- › Recent Australian studies show a significant increase in GHB intoxication cases, with emergency department visits rising 114% from 2015 to 2020. The severity of cases is also increasing
- › GHB, a naturally occurring compound in the brain, has legitimate medical uses but is often misused recreationally. It has a narrow therapeutic window, making overdose risks high
- › Combined use of GHB with other substances, particularly methamphetamine, is common and increases health risks. Many users don't report all substances used due to stigma or misconceptions
- › GHB overdose symptoms include drowsiness, lethargy, and can progress to coma and respiratory depression. Fortunately, most patients recover quickly
- › Natural strategies for improving sleep without the use of substances like GHB are included below

Gamma-hydroxybutyrate (GHB) is a naturally occurring compound in the brain, involved in key physiological processes such as sleep regulation and muscle tone. As a physiologic neurotransmitter, GHB has been explored for its therapeutic potential on the central nervous system (CNS), particularly in treating conditions like alcohol withdrawal and sleep disorders.<sup>1</sup>

Unfortunately, despite its legitimate medical applications, GHB has garnered attention for the wrong reasons, with people misusing it as a recreational drug for its euphoric and sedative effects, leading it to be infamously called the "date rape drug" or "liquid ecstasy."

Because it has a narrow therapeutic window, meaning the line between a dose that produces desired effects and one that leads to overdose is quite slim,<sup>2</sup> its misuse can have serious, potentially lethal consequences, as evidenced by recent studies from Australia.

## **Recent Australian Study Reveals Rising Trend in GHB Intoxication**

A study published in April 2024 in *Emergency Medicine Australasia*<sup>3</sup> analyzed data collected from 2012 to 2021 across four major hospitals in Sydney to assess trends in GHB exposure reports. The researchers found that from 2015 to 2020, emergency department visits related to GHB intoxication rose from 228 to 729 cases annually, representing a 114% increase.

While men still account for most of the cases, the number of women presenting with GHB intoxication rose significantly, from 27.9% in 2012 to 37.8% in 2021. The study also highlighted that the 25- to 34-year-old group consistently represented the largest proportion of GHB-related presentations, with a notable decrease observed in affected people aged 16 to 24 over the study period.

Of particular concern is the rising severity of GHB intoxication. Researchers noted a substantial increase in cases classified as high urgency (triage category 1), suggesting that GHB-related emergencies are becoming more severe and potentially life-threatening.

Most of these incidents occurred between midnight and 4 a.m., aligning with typical nightlife hours. The authors noted that these findings mirror trends observed in other parts of Australia and internationally. They concluded:<sup>4</sup>

*"The increasing number and acuity of GHB overdoses across NSW [New South Wales] ... may be related to increases in the co-occurrence of GHB and methamphetamine use and shifting demographics, with increasing overdose presentations among females.*

*There is a pressing need to understand the underlying psychological, social and drug market drivers of these increases to better target harm reduction and overdose prevention strategies."*

In contrast, U.S. data from the 2015-2020 National Survey on Drug Use and Health shows that only 0.05% of adults reported GHB use in the past year. However, this survey also highlighted that past-year use of methamphetamine, ketamine and ecstasy are strong predictors of GHB use, suggesting a correlation between GHB and other substances, which is consistent with findings from the Australian study.<sup>5</sup>

GHB overdose symptoms typically start with drowsiness and lethargy, which can progress to coma and respiratory depression. Muscle twitching and seizures may also occur. Fortunately, recovery is often quick and does not require specific treatments, with most patients regaining consciousness within a few hours. However, it's important to monitor the person's airway and provide breathing support if necessary.<sup>6</sup>

## **Further Insights on GHB Use**

An earlier study published in March 2024 in *Drug and Alcohol Review*<sup>7</sup> further explored the rising trend of GHB intoxications and provided additional insights into the broader context of drug use in Australia. This research focused on the frequency and effects of exposure to GHB in combination with other substances, particularly methamphetamine. The authors noted:<sup>8</sup>

*"Co-exposure to multiple drugs in cases of GHB intoxication has been reported and may significantly influence the clinical presentation. Concurrent use of GHB with other CNS depressants (e.g., alcohol, benzodiazepines) increases the risk of severe respiratory depression and coma, whereas GHB use in combination*

*with psychostimulants (e.g., methylamphetamine) increases the risk of cardiovascular complications and seizures."*

According to their findings, the combined use of GHB and methamphetamine is alarmingly common, with methamphetamine detected in 82.2% of GHB-confirmed cases. The authors also highlighted that many individuals using GHB with other drugs were not reporting all substances used, either due to stigma or because they perceived GHB as the primary cause of their symptoms.

Moreover, the study examined the emerging patterns of GHB use beyond traditional nightlife settings. It reported that GHB is increasingly being used as a coping mechanism for stress, rather than solely for recreational purposes. This shift in use patterns could explain the increasing number of female users and the diverse presentation times observed in other studies.

These findings underscore the importance of comprehensive toxicological screening and demonstrate that GHB itself isn't inherently bad. Rather, it's the misuse and lack of understanding about its effects that could pose significant risks.

## **The Controversy Behind GHB**

In a [guest article written by A Midwestern Doctor](#), he delved into the history of GHB. Developed in 1874, it was used as an intravenous anesthetic in 1964. It slows the heart rate without affecting blood pressure, irritating the veins or suppressing breathing. It also helps with muscle relaxation, induces sleep without lowering oxygen levels and protects tissues from damage.

Despite these benefits and the science backing its use, GHB faced a significant setback in the 1990s. As it gained popularity, particularly among bodybuilders, the U.S. Food and Drug Administration (FDA) and Centers for Disease Control and Prevention (CDC) began to highlight its risks, often exaggerating its dangers.

It was later banned by the FDA and misrepresented as a dangerous drug linked to sexual assault, overshadowing its actual benefits. Interestingly, its pharmaceutical version

known as sodium oxybate (Xyrem), remains legal.

Another formulation of GHB called low-sodium oxybate, which contains 92% less sodium than sodium oxybate, has also been approved in the U.S. for treating narcolepsy and idiopathic hypersomnia. According to a study published in *Nature and Science of Sleep*:<sup>9</sup>

*"LXB [low-sodium oxybate] is a promising long-term treatment for narcolepsy and idiopathic hypersomnia, demonstrating efficacy on symptoms including EDS [excessive daytime sleepiness], cataplexy and sleep inertia, with a safety profile consistent with that of SXB [sodium oxybate] in narcolepsy."*

These medications are very costly. The price of sodium oxybate ranges from \$60,000 to \$100,000 annually, leaving many patients unable to afford the medication despite its benefits for various conditions. I recommend reading the guest article in its entirety to learn more about GHB's history and impact.

## **Strategies to Improve Your Sleep Without Resorting to Medications**

If there's anything good that came out of banning GHB and making its prescription forms expensive, it's that it encourages people to focus on addressing the root causes of poor sleep naturally, rather than relying solely on medication. Here are some strategies to help you fall asleep more quickly and enjoy quality sleep:

**Try Emotional Freedom Techniques (EFT)** – This technique is a form of psychological acupressure, based on the same energy meridians used in traditional acupuncture for more than 5,000 years to treat physical and emotional ailments, but without the invasiveness of needles.

It can be highly effective in reducing stress and promoting relaxation, which are often the reasons people seek out substances like GHB. Check out the video below for basic steps on how to do EFT for relaxation and destressing.

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**Turn your bedroom into an oasis for sleep** – Your bed is a place to sleep and rest comfortably. Only two other activities will not significantly impede a restful sleep – reading and intimate relations with your significant other. Anything else, such as work, computers, cell phones or watching television, will reduce the quality of your sleep.<sup>10</sup>

Reduce any noisy interruptions from pets or outdoor activities. You might consider removing your pet from the bedroom or using a white noise machine to reduce interruptions from outdoor noises.

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**Establish a soothing pre-bedtime routine** – Humans are creatures of habit. When you establish a soothing bedtime routine, you're more likely to fall asleep easily. Activities such as a warm bath, reading a good book or relaxation exercises may help you fall asleep easier.

If you have trouble falling asleep at night, it's better to leave the bedroom and read quietly than to try even harder to fall asleep. I would strongly recommend using blue-blocking glasses if you do this to prevent your reading light from further depressing your melatonin production.

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**Keep a consistent schedule** – When you go to bed and wake up at the same times, your body becomes accustomed to the routine. This helps regulate your circadian clock, so you fall asleep and stay asleep all night. Keep this routine even on the weekends.

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**Get plenty of bright sunlight exposure in the morning and at noon** — Exposure to bright light first thing in the morning stops the production of the sleep-inducing hormone melatonin and signals to your body that it's time to wake up. Outdoor sunlight is best, so you might even want to take a quick walk outside.

Not only will this increase in physical activity help you sleep later, but taking your walk outdoors — either first thing in the morning or around noon when the sun is high — gives you more exposure to bright sunlight.

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**At sundown, dim your lights (and/or use amber-colored glasses)** — In the evening (around 8 p.m.) you'll want to dim your lights and turn off electronic devices. Normally, your brain starts secreting melatonin between 9 p.m. and 10 p.m., and these devices emit light that may stifle that process. After sundown, shift to a low-wattage incandescent bulb with yellow, orange or red light if you need illumination.

A salt lamp illuminated by a 5-watt bulb is an ideal solution that will not interfere with your melatonin production. If using a computer or smartphone, install blue light-blocking software like Iris — an improved version of f.lux. The easiest solution, however, is to use amber-colored glasses that block blue light. I found a Uvex model (S1933X) on Amazon and works like a charm to eliminate virtually all blue light.

This way, you don't have to worry about installing programs on all your devices or buying special light bulbs for evening use. Once you have your glasses on, it doesn't matter what light sources you have on in your house.

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**Check your bedroom for electromagnetic fields (EMFs)** — **EMFs** disrupt your pineal gland and the production of melatonin and serotonin, and may have other negative effects as well. To do this, you need a gauss meter. You can find various models online, starting around \$50 to \$200. Some experts even recommend pulling your circuit breaker before going to bed to kill all power in your house.

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**Exercise daily** — Your body thrives on exercise and movement. It reduces your risk of cardiovascular disease and metabolic disorders. Exercise will help you get to sleep

more easily and sleep more soundly. However, your body also releases cortisol during exercise, which may reduce your melatonin secretion. Exercise at least three hours before bed, and earlier if you can.

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**Keep your room cool** – The optimal temperature for sleeping is between 60 and 68 degrees Fahrenheit. If your room is cooler or warmer, you may have a more restless night's sleep. During sleep your body's core temperature drops to the lowest level during a 24-hour period. The cooler your room is, the more conducive it may be to your body's natural drop in temperature.

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**Sleep naked** – [Sleeping naked](#) will help keep you cooler, and provides a number of other health benefits besides improving your chances of a good night's sleep.

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**Evaluate your mattress and pillow** – You'll experience more restful sleep when your mattress and pillows are comfortable and supportive. You'll want to consider replacing your mattress after nine or 10 years, the average life expectancy of a good-quality mattress.

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## Sources and References

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- <sup>1, 2</sup> [Subst Abuse Rehabil. 2022; 13: 13–23](#)
- <sup>3, 4, 8</sup> [Emergency Medicine Australasia. August 2024, Volume 36 \(Issue 4\): Pages 604-608](#)
- <sup>5</sup> [J Psychoactive Drugs. 2023 Jul-Aug;55\(3\):268-273](#)
- <sup>6</sup> [Current Medical Diagnosis and Treatment 2024. Gamma–Hydroxybutyrate \(GHB\) Overdose](#)
- <sup>7</sup> [Drug and Alcohol Review. May 2024, Volume 43 \(Issue 4\): Pages 984-996](#)
- <sup>9</sup> [Nat Sci Sleep. 2023; 15: 663–675](#)
- <sup>10</sup> [Harvard Medical School, Healthy Sleep, Twelve Simple Tips to Improve Your Sleep](#)