

**GHB & Its Analogs:**  
**The Hidden Curse of Addiction**

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## Introduction

In June of 1996, I was already involved with the drug flunitrazepam (Rohypnol, aka roofies) and working on legislation to control it in California. One summer night, four young men collapsed in the streets of Hollywood. Two died and were brought back to life by paramedics. I was assigned to this then uncontrolled drug too. I was horrified and captivated. What if this had been unwitnessed and paramedics hadn't been called? Would JR and his friend be alive today? For that matter, had JR died that night, would the coroner have figured out the cause of his death? Very few coroners then---and still shockingly few today---had a clue about GHB or how and when to test for it. How many had already died....and no one knew? At that time, the Drug Enforcement Administration knew of six or seven GHB deaths. DEA's Dr. Jim Tolliver, who was tracking GHB, and I both agreed that there had undoubtedly been many more that went unnoticed. When I went to testify in Sacramento for the GHB legislation, Dennis Fraga came forward on his own to testify ... clutching the autopsy report from his son, Jeffery Fraga, who died from GHB. Obviously there were deaths out there that had been recognized, but there was no reporting mechanism in place. We would later learn that Dr. Jo Ellen Dyer from the San Francisco Poison Control Center had attempted to report two GHB deaths a few years earlier, but the Drug Abuse Warning Network (DAWN) wouldn't take them. There was no room for that data in their system. Dr. Tolliver then made a series of random phone calls to coroners around the country and, within a short period of time, the death toll jumped to 21. The DEA count now stands at 66. And, Dr. Christine Sannerud, who now handles this topic, has a lot more to track down if she is ever given time to do so. The death count on my database is over 120 at this time.

During the past four years, I've learned something new about GHB with absolute regularity and nothing I've learned has made me feel any different---This is one terrifying drug. After Caleb Shortridge died from a GHB overdose on April 30, 1998, in San Diego, California, his parents were stunned to find the internet swamped with bogus information about how safe and wonderful GHB is supposed to be. If so, how could their son be dead? The internet also said, over and over and over, "Do NOT call 911. Just let them sleep it off." They set up their own website to help counter this overwhelming flood of lies. That website has been the most incredible resource for two years. The "Viewer Comments" section of [www.ashesonthesea.com/ghb](http://www.ashesonthesea.com/ghb) should be mandatory reading for everyone involved in GHB research or politics or enforcement in anyway. The normal patterns of an abused drug's growth and spread have been broken. GHB, the bastard child of the internet, is every where.

Then we heard the stories of Matt in Pennsylvania and Josh in Northern California. The internet abounds with statements that GHB is not addictive, ignoring the works of Gantt Galloway who said otherwise. Withdrawal wasn't of concern to anyone. Yet Matt and Josh had pleaded for help escaping from the depths of GHB addiction for months. Their mothers, one a nurse, had taken them everywhere over and over, begging for help in saving their sons. Matt and Josh are dead. Their deaths will not be counted in the official DEA death toll. They died from overdoses of other drugs during their struggle to free themselves from GHB. But, in reality, it was GHB that killed them, and it was slow and tortured death. Haunted by their deaths, Anya Shortridge and I made a decision that would forever change my life. On December 23, 1999, we launched a GHB help line via <http://www.ashesonthesea.com/ghb>.

Within an hour, the addiction help requests started coming in and have never abated. What we have learned since then is indeed incredible, but there is so much more to be learned. Six months later, I have detoxed addicts who remain terrified of what long-term damage they have done. Some still report tingling and numbness in their extremities. Some still have periodic shakes in their limbs. The depression and irregular sleep hangs on for many. They are trying to be hopeful that this too shall pass. I don't have answers for them, and I'm worried for them. We have noticed that an unusual number of those who died from GHB and who were chronic users seem to have enlarged hearts. Often this has been dismissed as possible steroid use, if the deceased looked like he worked out a lot.

I'm not a doctor, but it begs the question, is numbness in the fingertips a result of an enlarged heart and thus reduced circulation? Chronic episodes of pulmonary edema cannot be good for anyone of any age. And, yes, I'm quite aware of the research into GHB for narcolepsy and cataplexy. It is still my heartfelt opinion that it is not GHB, but some safer, longer acting cousin to GHB, yet to be discovered, that these people need. Dr. Mortimer Mamelak, who researched GHB for nine years for narcolepsy, agrees with me. Another narcolepsy research doctor also agreed, until someone convinced him to deny his statements. So, tragically, the research focus seems to have been shifted toward stopping right here with this horrid drug. I'm deeply concerned that the drug company and researchers do not seem to realize or care that while GHB may help reduce cataplexy in those suffering from that rare disease, people all over this country are literally giving themselves a cataplexy-like syndrome from using GHB—it's called "carpeting out" or "scooping out" or "throwing down" or "the head snap."

As for any consideration for using GHB in treatment for alcoholism—I've read about the Italian studies and was absolutely amazed that not once did I read the word "impairment" or anything related to it. GHB users are as impaired or more so behind the wheel than an alcohol user. Also, a rather dramatic number of the participants increased their dosage on their own. Ironically, the GHB narcolepsy research studies do NOT track possible increased dosage by their patients. While the drug company maintains that their product usage is intensely tracked, I know for a fact that there is nothing built into the program that keeps a patient from buying additional GHB and upping their dose on their own. Their levels are not being

testing. Of course, they'd have to be tested at least twice a day to be meaningful! Furthermore, I'm not at all confident that the doctors don't just up their official dose at their request, making it look legitimate rather than admitting that it is the patient increasing the dosage. I must confess that I've lost a lot of faith in the integrity and reliability of medical research procedures over the past few years. There is so much more to be done.

## **GHB & Its Analogs: The Hidden Curse of Addiction**

Since December 23, 1999, our GHB addiction hotline via [www.ashesonthesea.com/ghb](http://www.ashesonthesea.com/ghb) (now linked to [www.trendydrugs.org](http://www.trendydrugs.org)) has received inquiries from 184 people (as of June 24, 2000) in at least 33 states (we don't know the location of 21 of them) and three foreign countries. Most are males, from 19-48 (mostly 20-37); about 24 are females. Beyond that, the doctors we have been working with have been contacted regarding other cases as a result of their names being passed around by those who have contacted us and from the website, as well as during their normal course of business. We are constantly hearing references in the chat rooms and from our viewer comments about other addiction cases.

To give an idea of how intense this has been for all involved: Drs. Deborah Zvosec and Stephen Smith in Minnesota in one five-day period had handled seven referrals through the hotline from Arkansas, New York, Alabama and Wisconsin. On that Wednesday, Dr. Smith was walking into the hospital when he saw three men pulling a fourth man out of the car. He was unconscious. He was intubated and shortly after became bradycardic and they lost his pulse---but he was then stabilized. Dr. Smith asked the patient's his buddy to call Dr. Zvosec because of their research; she interviewed him extensively over the phone. When asked if he thought any of his friends were addicted, he said, yes, probably the guy at whose house the party was being held. She urged him to pass their names around, for people to contact for help. A few hours later, a second young man turned up---the host of the party, who was in withdrawal. The intake counselor reported that this was the second withdrawal case of the week. While he was being admitted and worked up in the Crisis Center, his buddy was found down in the room, unconscious, with seizure-like activity. He was subsequently also intubated and admitted to the ICU. A rather busy week in Minneapolis for GHB. Bear in mind, there has been no advertising of the hotline to this point, and it doesn't even appear highlighted over other topics on the website.

Additionally, we have heard from several doctors throughout the country who stated they have been seeing GBH addiction and were seeking more information about it. Their cases are not included in our figures. Plus, we are aware that some doctors are saying that they have treated GHB addiction; but that sometimes means that they have given the usual 3-4 day non-medical detox, which isn't generally enough. That's like the doctors who saw Matt and Josh saying they treated GHB addiction. Not really. We need to make the information about GHB withdrawal risks common knowledge among medical practitioners to stop the deaths of young men like Matt and Josh. Many of our patients say they approached doctors or clinics and either left because it was obvious they had no clue about GHB or went through the 3-5 day detox and never returned because they knew that the doctors didn't comprehend the issue. Unfortunately, because the hotline is just me plus one part time assistant, our "clients" have not been given adequate supportive follow up. The ones who had family and friends involved with them and close to them fared the best overall, with some notable exceptions. Those with histories of other drug abuse have had the most trouble and some have gone back to GHB or binges on other drugs. Those without family or close friends or who refused to tell anyone got most of our attention. Though we pleaded with all to get medical supervision, some got only initial help or none at all. There are some we never heard from again after providing initial information. When we occasionally get a moment to inquire about them, some never sought help and are still on G and some are just fine. Needless to say, those who wrote us saying, "Just tell me what drugs to take and I'll get some and do it at home alone" were told NO. We plead with them to seek medical guidance. Those who refuse, we still monitor as best we can, often becoming their focal point.

We also use some of the detoxed clients to provide encouragement to seek medical help and encouragement to get through this. We have not had the opportunity to adequately document their cases. I hate to see this important data last, but I have been unable to interest anyone in the FDA in following up on it. The doctors we have been working with, who all have articles pending, would also love to do it, but are extremely busy just keeping up with their own work and the referrals and inquiries they get as a result of our hotline. But someone really needs to be following the long-term effects on these people as they continue to experience shakes, depression and other physical issues. We have proven the need, but we don't even have time or the knowledge to pursue a grant.

## **Some of the things we've noted:**

GHB addiction is not measured by quantity of GHB consumed, but rather by frequency. A GHB addict MUST have GHB within two to three hours in order to maintain. Beyond that, withdrawal symptoms begin, whether they recognize what they are experiencing or not. Many take specific doses at specific intervals, but others merely "sip" from a bottle of GHB throughout the day and night. Many had been taking GHB only a couple of months before becoming physically addicted. Four to six months seemed to be a common ground. While some of our inquiries have prior and/or other drug issues, the majority seem to have stumbled into this addiction quite by accident. Most believed they were taking something as safe as melatonin (is supposed to be).

Virtually all of them report that initially GHB seems to be god's gift, giving everything they were promised. You sleep well, you become more outgoing (anti-depressant), your sex life improves, you lose body fat, you get muscled really easily, etc., etc. And, then one day it turns on you. It can be just two months or a few years before they realize that they are in trouble. The biggest group seems to have been using four to twelve months before realizing they were addicted. This does NOT mean that they weren't having trouble before that. Because of the dissociation, they do not realize when the trouble begins. They typically have episodes that they don't remember. Interviews with roommates, wives, girlfriends, even their children prove that the troubles were there much earlier. Once GHB reverses on them, they typically gain weight, are unable to discipline themselves to keep up their workout schedule, become introverted and become unable to deal with the public (one young man in Oregon hadn't been out of his house for more than three weeks and was paying a neighbor to bring him groceries), have psychotic episodes and are unable to sleep. Everything it gave them is taken away.

Most of the inquiries are from bodybuilders, gym owners, personal trainers, young businessmen who work out regularly, health food store owners and employees. There are also airline employees (it bypasses the testing) and some general drug abusers. Bodybuilders are introduced to GHB in one of two ways, as a sleep aid or a direct workout aid. Some started taking it as a sleep aid. You sleep three or four hours very soundly, and then stay awake easily for the next 20 hours, not even getting drowsy after lunch, they say. Then one day they begin taking it to wake up in the morning and then again in the afternoon, etc., until they are at the 2-3 hour point. They typically say they don't know why---it just happened. Or, bodybuilders are started into GHB by taking it in the morning, along with caffeine and ephedrine pills. This keeps them from going to sleep but still gives the dissociated aspect. Thus their workouts are like watching themselves on TV.

First stage of chronic GHB use is the honeymoon. The second phase, whether the addict recognizes or remembers it, involves a down side though they may think all is well. Marriages and businesses begin to fail. Wives are confused and miserable and ponder leaving them. Some have left. Children find their fathers passed out naked in the front room, urinating all over themselves or passed out in the car in the driveway or, worse yet, experience their father passing out at the wheel of the car with the child in the car. Wives live in hell wondering what is going on, finding their husbands asleep in the bathtub, for example. They learn to hang around to turn off the water or to drag him out of the tub to keep him from drowning. For a woman in Utah, after months of tub monitoring, well, she doesn't have to do that

anymore. He's dead. A lady in California started videotaping her husband's bizarre incidents. She wasn't sure what they were caused by, but she knew something was wrong. She woke up at 2 a.m. recently and he wasn't still in bed. She searched the house and then went outside to see if the car was still there. It was, but she found him asleep in the middle of the street in front of their house. She videotaped him and showed him the tape. He dumped more than 70 bottles of GHB analog that he had stashed and went to the ER in withdrawal. They were determined to do a mental evaluation on him though she tried to tell them what was wrong. Even in a top-rated hospital, they had no clue and persisted in the mental evaluation until she got in contact with me and information about GHB withdrawal and our doctors names were provided. He was pulled out of the psych ward and put into intensive care where he remained for several days, strapped down most of them. He remembers very little of it, but was hallucinating (he loves boats) that he was strapped to the deck of a ship adrift at sea for days.

During withdrawal, there are at least three stages. Withdrawal starts within 2-3 hours of the last dose. First there is profuse sweating, which many describe as beginning in the palms of their hands and soles of their feet. Many refer to this sweat as very waxy or oily. They feel sick and anxious. Blood pressure and pulse soar to dangerous levels (stroke level documented in some). The first two or three days are most critical in terms of medical issues, re BP, etc. Unfortunately, once this stabilizes, doctors who don't realize what they are dealing with believe them to be "OK." They may talk in complete sentences and say the right things to doctors, but they are not usually OK. The second stage, which generally runs around 8-12 days, is just beginning. They will experience high anxiety, hallucinations and days without sleep, which will only exacerbate the hallucinations. They are simply NOT safe to be home alone with medication. During this phase they may not recognize friends or family and may say crazy and hurtful things. We always warn friends and family not to be offended by anything that is said during this phase.

After this, phase three, they will feel better, but will likely face depression. This too should pass, but it may take weeks and weeks or even months. Ironically, we have also noted that patients who rely heavily on us during their first 10-14 days, especially when not in the hospital, literally "forget" about us, just as they forget what went on during that period. We have gotten as many as 15-20 emails a day from patients at home but deep into self withdrawal, just checking in, just trying to stay "OK." It's scary for us, but at least we have a handle on what is going on with them. Suddenly, they disappear. We've

come to learn that if it has been at least 8- 10 days, that may be OK, just a sign that they are out of the fuzz. I'm sure many don't even realize how many times they emailed us. We also noted that their first emails are often full of misspellings, drastic grammar errors, incomplete sentences and thoughts, etc. Bear in mind, these people generally are not in withdrawal at this stage, but are now functioning at this level!!!! About 30-45 days later, this often improves significantly, and you get a better picture of their normal functioning level.

We have also had some inquiries from suicidal people. Others have said that they truly could understand committing suicide while addicted to GHB and even while trying to detox. The levels of pain and anxiety are incredible. Those who have used other drugs, especially those who have been addicted to other drugs, swear that GHB is the worst by far. One young man did attempt suicide while his mother and I tried to set up treatment. Fortunately he failed and got treatment and is one of our best "counselors" for others pondering detox or struggling with it. I've never forgotten the frantic message I got from a guy in Connecticut saying that he had tried everything and couldn't get away from GHB. We were his last hope and if we didn't help him, he would put a bullet in his brain because he couldn't live like this. He was quite paranoid, and instead of giving us the City he lived in or a phone number, he wrote in that it was none of our business and he wasn't giving it out. The typing errors were rampant. Tragically, his email address didn't work. In his anxiety and paranoia, he seems to have forgotten that his email is blocked to all outside mail, unless he clears it for a specific incoming address. We were unable to reach him. Anya put a pop up screen on the website for a few weeks, asking him to call us because of the email problem. We never heard from him. We have no idea if he is dead or alive.

The women who are addicted are also typically those who work out regularly. Their range from women who just work out to be in shape to dancers and bodybuilders. They have endured the same syndrome and have put husbands and boyfriends through the same stress and concerns. One lady had tallied \$12,000 in credit card debts behind her \$100 bottle every three-day habit. When she contacted us, her husband hadn't spoken to her for about two weeks and was ready to leave. I asked her to print out my emails and hand them to her husband, requesting only that he read them, and then to walk out of the house and go to her mother and tell her the whole story. She did. He joined her there and they got her into treatment. Their marriage is now back on track and they are working on the credit card debt. One female from Texas had died twice from GHB but was brought back by paramedics. She had been raped, but had not reported it because she figured she'd be told it was her fault. Her boyfriend was very supportive and rushed her to the ER in withdrawal and stayed with her. She promised to seek counseling re: the rape.

Most of the addicts report rapid, easy weight loss (body fat) and easy muscle gain. No one seemed to have a real explanation for it. Even Dr. Mamelak told me that narcolepsy research patients also lose weight. I recently spoke to Dr. Wallace Winters (retired FDA) who has researched GHB decades ago as a dissociative anesthetic. Dr. Winters considers GHB a CNS excitant and believes that may have something to do with it. Furthermore, in our discussion, we noted that the narcolepsy patients are on stimulants during the day. And, the bodybuilders are extremely likely to be taking ephedrine and caffeine products during the day as well; most of the ones I interviewed with also taking a variety of such substances (virtually all of them without any understanding of the risks involved in those products as well). Thus Dr. Winters believes this may be explained by an interaction between the GHB excitant effect and the stimulants they are on. The fact that this effect later rolls back on them is consistent with what happens with many diet drugs, including ephedrine based products or things like phen-fen. Many have had blood pressure and heart related issues. This is intensified for those also taking stimulants and/or steroids. One young man ended up on the heart transplant waiting list! His cardiologist had never heard of GHB and believed he would die without a transplant. On a ventilator and sedated (because of violent episodes) his heart "miraculously" began to improve. The doctor was stunned. He didn't realize he had sedated the patient through his withdrawal period! That case is being researched along with other heart-related episodes. Virtually all of the addicts we have dealt with report numerous impaired driving incidents, whether or not police were involved. In some cases they merely woke up to find damage to their cars or found themselves at the wheel of the car in strange places. In other cases, they awoke to find police standing all around them and were able to explain it as having been working hard and just fell asleep. Others were booked for drunk driving because of alcohol involvement, etc. They ALL describe multiple impaired driving incidents among their friends. They all describe knowing numerous other GHB addicts and even more GHB abusers.

GHB-impaired drivers have killed their share, though GHB goes undetected in many cases because of still limited awareness by law enforcement and coroners. In S. Carolina a GHB-impaired driver killed a three-year-old in an oncoming vehicle. In Toledo, Ohio, a similar fatal accident. In Los Angeles, California, Jeffery Dodley was killed by a GHB-impaired man who hit him at 80 miles per hour, killing him instantly and causing his car to explode in flames. Scott Brockman was a chronic user who had made it through the system twice already without the GHB being detected by law enforcement. He did have a conviction for one incident, based on his relatively low blood alcohol. This time the term "GHB" surfaced during preparation for his second-degree murder trial. Tests established ingested levels of GHB. He is now serving 14 years plus 14 months time served. Typically these people find it hard to view themselves as "addicts" and do not seek follow up counseling. Those who did attend AA or NA meetings said they felt like outsiders. No one even comprehended the drug they were addicted to in the first place. They found it hard to consider themselves in the same boat as the people they found at

these meetings because they didn't relate to those who were alcoholics or tweakers or coke heads. They NEED to comprehend that they do need follow up therapy, either one-on-one or in carefully selected groups.

## JOHN'S STORY

John's story is all too common. At 37 and with a lifetime of bodybuilding as a base, he wanted to personify health and fitness for the members of his new gym. Adverse to drugs in general, he used a number of sports supplements, thoughtfully selecting the chemicals he introduced into his body. (We agreed to talk later—after detox—about the ephedrine products he was taking.) In the spring of 1999 he was introduced to gamma hydroxy butyrate (GHB) and its analogs. Today he feels that at that moment, he signed a pact with the devil himself. Before taking GHB, John poured through the mounds of material about it on the internet. This was the wonder drug of the world! He found no significant adverse effects listed. The warnings not to use with alcohol fit his light use of alcohol anyway. The comments about it as a date rape drug didn't apply to him; that wasn't something he would do. He started with a product containing gamma butyl lactone (precursor to GHB and an active analog).

The impact, he says, was awesome. Everything in his life got better. Sex was great. Eating was even better. He felt he could see the muscle gain and fat loss happen right before his eyes. He was awestruck that when he slept on GHB, he no longer felt sleepy during the daytime. He thought he would be taking GHB products for the rest of his life. What he didn't know was that some people have indeed taken GHB "for the rest of their lives," lives ended all too soon by this unpredictable and fickle drug. John's customers were impressed at his looks and his demeanor. This was a happy, healthy guy. He couldn't say enough good things about G. He told everyone around him. He shouted it from the highest steeples. He encouraged everyone to take GHB. There were red flags, but easily overshadowed by the wonder of it all. There were a couple of episodes when he felt he had stopped breathing or at least skipped a few breathes at night and woke up in a panic, trying to force himself to breath regularly again. But he really didn't blame the G. He noticed the "head snap" (similar to the "carpeting out" or "throwing down" experience of the recreational users but less severe) it can cause. Brushing his teeth after taking it, the head snap occasionally made him smack the mirror with his head, for example. He had crashed into a couple of things, breaking off the oven door handle as he passed by and suddenly "snapped." He recounts an incident when a friend was flying high in his convertible and feeling good on his GHB. He passed out while stopped at a stoplight. The car started coasting forward, right through three red lights. Fortunately the roadway was flat and the top down. A passing motorist was able to jump out of his car, catch up to the slow moving car and slam it into park. Yes, there had been red flags.

After nine months of use, John was now taking it day and night. It put him to bed, and it kept him on track all day long. It just somehow happened. Then one day he had taken a combination of vitamins and supplements and hadn't taken his usual dose of GHB analog. He suddenly began sweating in a most unusual way. The palms of his hands and soles of his feet were oozing a thick, waxy sweat. His heart was racing. His blood pressure soared. Blaming it on the combination of additives he'd taken so close together, he went ahead with the GBL dose and felt better. The wonder drug had cured, whatever was wrong. GHB proponents love to claim that only the "irresponsible" users, the ravers, the careless, etc., fall victim to any problems with GHB. John would have said exactly the same just a few short months ago. Being an intelligent, responsible person, he now experimented. He was careful not to take anything that might cause a reaction. And then he skipped the usual dose of G. The withdrawal symptoms began. The racing heart. The soaring blood pressure. He had proudly noticed that his veins stood right up when on GHB. He now noticed that they seemed to disappear when he didn't take it. He had also noticed that if you put 1,4 butanediol—another GHB analog that he had been using interchangeably with GBL—in a styrofoam cup, it ate the styrofoam. He now wondered what it might be doing to his body. Once he realized he was addicted, it was like the grip of GHB tightened on him, threatening that it could kill him if he tried to stop.

He searched the internet again and found <http://www.ashesonthesea.com/ghb>. He talked with us at length but was scared and playing the waiting game. He said he dreaded every drink of GHB and was gradually cutting back, but just wanted to get everything in order before he went in for treatment. First it was, I just want to wait until my transfer to another insurance company is complete. Then it was, I just want to wait until I move into my new house. Then it was .... He waited too long. He hadn't told me that he had barely been out in the public (or even in his gym to keep things running) for weeks. He was becoming quite introverted and experiencing bizarre behavior, intensified by his efforts to cut back on doses. His terrified wife finally called 911, and he went to the hospital escorted by ambulances and police cars. The cops didn't want to tackle his muscle and bulk and prayed that the paramedics could put him down with medication. Despite our best efforts (his doctor did contact one of ours), his doctor kicked him out the door just three days later with a prescription for lithium. He called me right away and I recognized the shakiness in his voice. I pleaded with him to hand the medication off to his wife. Fortunately, the lithium (various protocols are used by our various doctors) worked well for him, putting him in a lethargic fuzz for eight to ten days and keeping him out of trouble with hallucinations and wild behavior that many experience during that phase. He said he feels incredibly better to be free of it but is frustrated by the sense of "doom and gloom" that prevails. A few months later, it is dwindling, but isn't over and he has yet to establish good sleep patterns.

More than 7,000 overdoses have been documented in emergency rooms nationwide and more than 66 deaths are now considered GHB-related (as of June 24, 2000), according to the Drug Enforcement Administration. There are more than 50 other deaths being reviewed by the DEA at this time, many, many of those deaths coming from our website. This means the death rate more than doubled in 1999 and many have died already in the year 2000. Experts agree that this is likely just the tip of the iceberg since neither law enforcement nor medical examiners have known enough about it to recognize it in many cases. Results of a UCLA survey of GHB users indicated that although 67 percent reported loss of consciousness, only seven percent had gone to the ER. If that statistic is at all representative, then the 7,000 cases reported by ERs may reflect only seven percent of actual overdoses. I have one young man who claims to have overdosed 50 times and has never seen an ER.

## **Effects - Unpredictable**

Little is known about how GHB works and especially how it selects its victims. It is extremely dose sensitive and very unpredictable (no matter what the "quality" of the product). Users, especially beginners or the unsuspecting victims, often vomit and experience body jerking. Users may lose control of bodily functions or wet themselves during the night, unable to wake up and go to the bathroom. They may pass out (called "carpeting out" or "throwing down" among the ravers and club goers) and, while most "sleep it off," the unconscious state is risky. For those taking lighter doses, there may be incidents of the "head snap," when GHB takes effect. One user described the head snap as an involuntary snap forward of the head; brief but dangerous. He had experienced this while brushing his teeth and had broken mirrors with his forehead on occasion. Another addicted reported the same sensation and indicated he had broken several sets of glasses from the head snap. Breathing may slow to as few as six breathes per minute. They cannot hear phones ringing, horns blaring, fire alarms, etc. At some point, the individual may be without a protective "gag" reflex, allowing death to come easy. Others have been killed by those driving under the influence of GHB or GHB/alcohol.

A victim can die from direct effects of the drug, simply forgetting to keep breathing, having seizures that block the airway. A person in a GHB coma left lying on his (or her) back with gum in the mouth could die simply because the gum happened to fall into a position blocking the airway (it has happened). A person can go into a GHB coma while sitting in the bathtub and simply slide down into the water and drown without even a whimper (it has happened). A user can die from simply taking a dose, as directed for a sleep aid, and going to bed, face down on a pillow. There is no "safe, responsible" use level. GHB is commonly listed as a central nervous system (CNS) depressant, but really belongs in a class of its own. It produces symptoms somewhat similar to alcohol intoxication in general, but with a few twists of its own. Extreme cases of intoxication will appear similar to PCP. For example, a young man in Los Angeles, unknowingly dosed with GHB in a Hollywood club, ran through the club, grabbing women's breasts and was thrown out. He ran from the location, tearing off his shirt (common to PCP users), screaming that the world was coming to an end and that he was on fire. Somehow he climbed on top of a Burger King restaurant and held LAPD SWAT officers at bay for two hours, hurling cans of paints and other objects from the rooftop. He was ultimately knocked down with a beanbag round. Four hours after taking the drink, the episode ended suddenly. He had no recall of what he had done.

Club owners often recognize that this is a "new" drug when it hits their facility. Common indicators that GHB has indeed arrived include:

- increase in rapes (typically noted via the rape treatment centers—but commonly unreported to police) and,
- sudden increase in problems at the location (more disturbance calls),
- vomit in the bathrooms and hallways, etc.,
- little vials left lying around,
- rapid onset of intoxication,
- increased aggressive and/or sexually oriented behavior by patrons,
- increased drunk driving around the location but with surprisingly low blood alcohol levels,
- unarousable "drunks" inside and outside the location, etc.).

## **Addiction Nightmare**

Those who become addicted are in serious trouble, as detoxification from GHB is difficult and even life threatening. Bodybuilders are the ones more likely to become addicted since they are most likely to take it on a regular basis, while partygoers "may" last longer with just occasional use. Several months ago I got to know a man who had been addicted to GHB for eight years. A former bodybuilder (who even modeled workout clothing with some awesome abs) and a contractor, GHB had taken over his life. His ability to discipline himself and work out was long gone. His body was clearly that of an EX-body builder. When I interviewed him on camera for French TV, he struggled to stay focused and finish sentences, something he attributed to the prolonged abuse of GHB. He'd lose his train of thought and in frustration say, "Trinka, I'm telling you. I wasn't like this. It's the GHB." He was working as a contractor on a small scale. His marriage was falling apart.

I had met him through a doctor at UCLA (Dr. Karen Miotto) who was studying GHB, and interviewing users around the campus. She had introduced me to Dave and was planning to help him detox, but UCLA, like most facilities, had little exposure to the withdrawal syndrome from GHB. After talking with other GHB experts (and learning that it's more likely a 10-14 day, intensive care situation than the usual 3-5 day detox), they proceeded with his detox---and what an experience it was for them all. By the time he actually went into the hospital, he had gotten even more confused and frustrated. He would somehow remember or be able to find my phone number, but would lose the UCLA phone numbers. He would call me, asking for his doctor's number (remember--he knew HER before meeting ME). About eight to ten days later, he would call me again, asking for her number and oblivious to the prior conversation.

Sometimes he remembered his doctor's name and sometimes he didn't. This happened three or four times. His wife had given up on him and was ready to leave; her three children didn't need any more of this mess. Then one day I got a call that he was in the hospital in detox. They were in Day 4, and the doctors were worried. He was experiencing bizarre episodes, despite heavy medication, and they were actually worried that he might not live through it. He did survive. Detox took 12 days plus psychiatric care follow up. For UCLA Doctor Karen Miotto it the worst drug withdrawal she had seen. His experience--which he does not remember at all--is the subject of a paper that will be published soon.

The doctor had told me he was doing well and working at getting his life back together and back to work. Then she lost contact with him. We both left messages for him and got no replies. The various numbers did or didn't work from time to time, but we weren't making contact. Some of the numbers were disconnected. We really became concerned as the weeks passed that he had either started using again and didn't want to admit it to us---or worse. Frankly, I was ready to call the LA Coroner's Office to check. But a couple of days ago I ran across his number in an old note and called it one more time, just in case. To my amazement, his wife answered. Yes, he was still alive, and yes, they are still together. He's doing well, but just busy. She was thrilled to have her husband and father of her kids back. Later he called, and what a difference. This wasn't the fuzzed, disorganized conversation of the past. This was a man with clarity and life, back among the living. He said his body still needed some "reconstruction" to see those washboard abs again, but he was on his way. Tragically, after several months of doing great, the quick profit from manufacturing and selling GHB called to him. He went back into producing it and fell victim to consuming it again. He was recently busted by a S. California agency and, of course, went through withdrawal in the jail ward where doctors were unfamiliar with his condition. He literally died on them, but was brought back, spending two days on a ventilator. The detective was in fact notified that he was dead and didn't know until two weeks later that he had survived. His marriage will probably not survive this time.

Not everyone will have such a tough time in detox, but neither is his experiences that unusual. During the past few months I've learned a lot about a couple of young men who were addicted to GHB, lived several months of hell trying to escape from it and paid the ultimate price, overdosing on other drugs trying to stay off the G.

## **GHB Withdrawal is Life-Endangering**

### **Joshua**

Josh in Northern California and Matt in Pittsburgh, Pennsylvania, didn't make it. For months their frantic mothers went with them from ER to ER and treatment facility to treatment facility, pleading for help for their sons and waving bottles of GHB analog products. No one seemed to comprehend the severity of the battle. No one had the right answers to their quest for relief from GHB addiction. Three- to five-day detox and out the door is NOT the answer to a GHB addiction. From March 1999 until his death July 4, 1999, Myrna Parks struggled to help him. He resisted help at first, buying into the nonsense of the GHB gurus of the internet that GHB is totally safe. "Mom, it can't be bad for me. I bought it at a health food store." By March of 1999 when Josh came home to live with his folks, he was sick. He had lost ten pounds in just four days and his saliva glands were no longer working. He had severe diarrhea, vomiting and a white ring around his mouth. He was unable to sleep with body tremors and a high pulse rate. She describes the ambulance run this way, "He became rigid, unable to sit or talk. We could not lay him down in the ambulance because he had lost the ability to swallow his own saliva and began to choke on it. He had to leave him sitting up so that he could drool down his chest. His eye would roll to the back of his head. He could not take/follow commands, hold or squeeze my hand. He was in a complete vegetative state. I prayed. I couldn't let go." Somehow Josh survived that day.

Still, he was angry when his mother rushed him to the ER. She had overreacted as far as he was concerned. Remember, the internet gurus say not to call 911, not to take anyone to the ER; just let them sleep it off. That is potentially deadly advice in a GHB overdose and certainly not helpful to the person in withdrawal from GHB, for whom sleep does not come for days. GHB withdrawal is now known to be life endangering. This was but the first of many episodes for Josh in the final months of his battle. Then on July 4, 1999, Josh pleaded for something to help ease the pain and sleep. His mother urged him to try hard to sleep with just his prescribed medication and dosage. Unable to do so, Josh apparently acquired someone else's medication and died of an overdose of a mixture of drugs, seeking only a night's peace from the withdrawals from GHB.

## **Matt**

On September 1, 1999, a similar battle--18 months in duration--ended for 26-year-old Matthew Michael in Pittsburgh, the youngest of four. A registered nurse with experience in drug and alcohol rehab, Matt's mother literally watched him die over 18 months of hell. He was hospitalized ten to 15 times during that year and a half. She advised paramedics and doctors that he had been taking Renewtrient and NRG3 (GHB analogs) to no avail. Experience with GHB was and still is limited. He struggled through numerous driving under the influence arrests. She saw him fall asleep standing up. When not on it, he endured sleeplessness, abdominal pain, rapid heart rate, soaring blood pressure, profuse sweating, tremors, eating disorder, inability to concentrate and depression. At the end, he would complete one more brief detox program, report to jail for a 72-hour lock up re a previous DUI and go home to die of multiple drugs, trying not to take GHB again.

## **What help is there for the addicted?**

Most of those asking for help have gone to ER for overdose or withdrawal symptoms. Withdrawal symptoms may be mistaken for a drug overdose at the ER. Many have sought help with their addiction but were met by total disbelief from those who had never heard of GHB addiction or were turned off to the system by what they felt was inadequate treatment. Many said that they spent only three or four days in treatment and then were sent home locked up in a cold, dark room with little or no medical attention, at a point when they recognized that they needed further treatment. They said that they realized that the doctors were ill informed or had no clue at all what they were dealing with, and that they would not subject themselves to such torture again. It was very difficult to convince them that proper referrals and medical treatment were possible. It was often difficult to convince them that "weaning" oneself from GHB is virtually impossible for most people, and that home detox just won't work. Plus, it's dangerous. They typically asked us to "just tell me what drugs to take and let me do it at home." Such information was, of course, not an option. We pointed out that GHB withdrawal is life endangering. That doctors needed to monitor them and treat their condition as it changed. First the doctors would likely have to deal with racing pulse and soaring blood pressure. Then they'd have to deal with the bouts of anxiety, sleeplessness, overall pain, hallucinations, depression, etc. A 10-14 day medical detox would be the best route, according to our experts, getting the worst of it behind them. Some facilities working with GHB withdrawal sedate heavily during that 10-14 day period, allowing them to "miss" the worst of the experience. In any case, doctor supervision and immediate medical care is the key. Those who chose that path are now thankful. Those who persisted with trying to wean themselves off or doing it at home with or without doctor supervision, typically found it a much longer, tougher method and some failed. Those who confided in supportive friends or relatives fared the best. Those who faced it alone suffered the most.

If they lived near one of the handful of experts we were working with, we referred them directly to our doctors. If not, we tried to help them locate treatment facilities and doctors capable of doing a medical detox and willing to learn. We then linked their doctors with our experts for advice. Most Poison Control Centers were very helpful in identifying medical detox facilities. Most treatment centers were helpful and willing to learn. We were shocked at those few who said they didn't want to "be bothered" by anything new and potentially dangerous (even though they were set up to do a severe delirium tremens detox which is quite similar). Is this next part needed? One was just flat rude across the board (more than one rude employee). Ironically, the rude facility demanded to have the addict call them directly and wanted to know why we were making the call from California. That was easy to answer--Because we did not want the addict to be treated so offensively. That person would not have persisted in efforts to seek medical help after being treated offensively and might have become a statistic on the death list. Our expert doctors use a variety of treatment plans and everyone is still trying to learn what works best.

Frankly, the most important thing is SUPERVISION and SUPPORT for at least two weeks followed by ongoing counseling and monitoring. I'm indeed not a doctor, but have had the opportunity to view it all from a unique perspective. The ideal seems to be 10-14 days inpatient care, sedated through the worst of it so that medications can be changed as conditions change. Second choice seems to be intensive care through the first few days, the more the better, followed by at least residential care. Third choice is intensive care for the first days and then someone with them at all times at home or wherever so that the patient is NOT handling his or her own medication.

It is our hope to alert all treatment facilities and ERs to the life endangering quality of GHB withdrawal so that proper treatment will become the norm, not the exception. We also hope to alert everyone to the fact that it is often used to beat drug testing, sometimes by people in key public safety jobs. One of the saddest inquiries we had was from a young man whose father is a doctor. He had gone to his father and confessed all, explaining that he was addicted to GHB, this product he was buying at a health food store and that he believed it would kill him. His father looked at him blankly and said, "How stupid can you be? If you bought it in a health food store, how dangerous could it be? Just STOP taking it!" That advice could have indeed been deadly.

## **Analogs - Chemical Cousins**

We actually may continue to see less real GHB, and more and more analog products. Analog product names surfacing so far have included: Blue Nitro, Renewtrient, Revivarant, Remforce, Firewater, Enliven, Serenity, ZEN, Revitalize Plus, Thunder Nectar, Weight Belt Cleaner, SomatoPro, Verve, Jolt, Eclipse, Regenerize, Remedy GH, NRG3, GHRE, GHGold and G3 (being sold in some franchise GNC stores). They may appear in any color, including clear, light amber, red or blue. Anyone driving a vehicle under the influence of these substances presents a potential safety hazard. They are used in rapes in exactly the same way GHB is used. Many of the documented GHB-related deaths involve these products. Many of them list the main ingredient as 2(3H)-furanone di-hydro and claim that it does not contain GHB or any other illegal substance. This ingredient is simply gamma butyl lactone/butyrolactone (GBL), butyrolactone (GBL), the precursor of GHB, being listed by a chemical synonym its other chemical name. Though a precursor to GHB, it is also an active "analog" of GHB. Several of the products list the primary ingredient as 1,4 butanediol (BD) or its other chemical names synonyms, tetramethylene glycol or sucol-B. These products may also surface labeled as degreasing or cleaning products that are in reality being used for human consumption. Or, the bottle (Revitalize Plus, for example) may say simply "proprietary polyhydroxyl complex, a blend of amino acid metabolites."

A third analog has been referenced on the internet. At this point, I'm not aware of any agency identifying it in a product, but I'm also unaware of any agency capable of testing for it! Mere possession of the precursor/analog GBL or the analog 1,4 butanediol or other analogs is not illegal in and of itself at this time. But, any action that converts the product to "human consumption" (such as sticking a straw in the bottle, pouring it into human consumption type water or vitamin or mouthwash bottles, or labeling it as a sleep aid or nutritional supplement, etc.) makes it an analog. As of January 1, 2000, GBL is a listed precursor chemical federally. Federal legislation to make GHB and its analogs a federal Schedule I drug passed in January 2000 and went into effect on March 13, 2000. An analog is a substance that has or is represented to have or is intended to have effects on the central nervous system which are substantially similar to or greater than, the controlled substance itself. Some state laws require that the analog also have "substantially similar chemical structure," which can add confusion to the issue.

While the vast majority of GHB products are seen as liquids, they may appear in powder and capsule form. Teens have also been seen with a putty like substance (GHB is hydroscopic and thus hard to keep dry as a powder). Some of the Internet sites promoting these products admit that there is no scientific evidence to back up the safety and beneficial effects claimed by them. Some even note that their product is being manufactured in an FDA approved lab; they further admit that this does not mean the FDA has approved the product itself. Labels notations such as "Does not contain GHB" or "legal (or herbal) GHB" are literally your first clue that the product is an analog of GHB! Most of them also foolishly discourage calling 911 when someone overdoses on these products, a deadly recommendation. When cases identify the Internet as the source of the product and when the physical location of the Internet source can be determined, prosecution may be possible either under state laws or under federal provisions through the Department of Justice, Office of Consumer Litigation.

## **The Doctors Who Have Been Helping Us:**

NOTE: All have published on the subject of GHB and/or have manuscripts pending publication. Other doctors/clinics with experience with GHB withdrawal treatment are encouraged to contact <http://www.ashesonthesea.com/ghb> and add their names as referral resources.

- Dr. Jo Ellen Dyer  
Jo Ellen Dyer, Associate Clinical Professor of Pharmacology Pharmacy, UCSF  
California Poison Control System  
San Francisco General Hospital  
1001 Potrero Ave. Rm 1E86  
Ave Room 1E86  
San Francisco CA 94110  
Phone: 415 502 2058  
Fax: 415 502 6060
- Dr. Karen Miotto  
UCLA  
760 Westwood Plaza  
NPI A7-384  
Los Angeles CA 90024  
Phone: 310 206 2782
- Deborah L. Zvosec  
Research Associate  
Hennepin County Medical Center  
Emergency Department  
Minneapolis, Minnesota  
Voice mail (612) 347-3963  
Fax (612) 904-4470
- Stephen W. Smith  
Assistant Professor of Clinical Emergency Medicine  
University of Minnesota School of Medicine Faculty Physician  
Hennepin County Medical Center Emergency Department  
Minneapolis, Minnesota  
Voice mail (612) 347-3963  
Fax (612) 904-4470
- Drs. Alex and Janice Stalcup  
New Leaf Treatment Center  
2151 Salvio St. Suite T  
Concord CA 94520  
Phone: 800 636 8050 or 925 688 0500

## Common Chemical Names

- GAMMA HYDROXY BUTYRATE (GHB)
- GAMMA BUTYL LACTONE (GBL) or 2(3H)-FURANONE DI-HYDRO
- 1,4 BUTANEDIOL (BD) or TETRAMETHYLENE GLYCOL or SUCOL-B

NOTE: There are other active analogs. A third one has been referenced on the internet but hasn't yet been identified in products (possibly from lack of awareness by labs)

## Reported Product Names

- AMINO FLEX (BD)
- BLUE NITRO or BLUE NITRO VITALITY
- BORAMETZ (BD)
- BVM (BD)
- DORMIR (BD)
- DREAM ON (BD and/or GBL)
- ENLIVEN (BD)
- FIREWATER
- FX (BD)---ORANGE FX RUSH, LEMON FX DROP, CHERRY FX BOMB
- G3
- GH-GOLD (May be referred to as GHG)
- GAMMA G
- GHRE (BD)—(GROWTH HORMONE RELEASE EXTRACT)
- GH REVITALIZER
- INNERG (BD)
- INVIGORATE
- JOLT
- NRG3 (BD)--
- PINE NEEDLE EXTRACT (BD)
- PROMUSOL (BD)
- REACTIVE
- REGENERIZE
- RENEWTRIENT
- REMFORCE
- REST-EZE
- REST-Q (BD)
- REVIVARANT or REVIVARANT G or REVITALIZE PLUS
- SERENITY (BD)
- SOMATO PRO (BD)
- THUNDER
- THUNDER NECTAR (BD)
- WEIGHT BELT CLEANER (BD)
- WHITE MAGIC (BD)
- X-12
- ZEN (BD)

NOTE: New names surface regularly. Also, Revitalize Plus lists only "proprietary polyhydroxyl complex." Dream On also does not list any of the chemical names but has tested positive.